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Section XII
Polyethylenes

ALLIED CORP.: A-C Polyethylenes & Copolymers:

Homopolymers:

A-C 6, A-C 6A:
Mettler Drop Point: C: 106
F: 223
Hardness dmm: 4.0
Density g/cc: 0.92
Viscosity-cps @ 140C: 350
Acid Number mg KOH/g: Nil
Physical Form: Prills, Powder

A-C 7, 7A:
Mettler Drop Point: C: 107
F: 225
Hardness dmm: 2.5
Density g/cc: 0.92
Viscosity-cps @ 140C: 350
Acid Number mg KOH/g: Nil
Physical Form: Prills, Powder

A-C 8, 8A:
Mettler Drop Point, C: 116
F: 241
Hardness dmm: 1.0
Density g/cc: 0.93
Viscosity-cps @ 140C: 400
Acid Number mg KOH/g: Nil
Physical Form: Prills, Powder

A-C 9, 9A:
Mettler Drop Point, C: 117
F: 243
Hardness dmm: 0.5
Density g/cc: 0.94
Viscosity-cps @ 140C: 450
Acid Number mg KOH/g: Nil
Physical Form: Prills, Powder

A-C 617, 617A:
Mettler Drop Point, C: 102
F: 216
Hardness dmm: 7.0
Density g/cc: 0.91
Viscosity-cps @ 140C: 180
Acid Number mg KOH/g: Nil
Physical Form: Prills, Powder

ALLIED CORP.: A-C Polyethylenes & Copolymers(Continued):

Homopolymers(Continued):

712:
Mettler Drop Point: C: 108
F: 226
Hardness dmm: 3.5
Density g/cc: 0.92
Viscosity-cps @ 140C: 1600
Acid Number mg KOH/g: Nil
Physical Form: Diced

715:
Mettler Drop Point: C: 109
F: 228
Hardness dmm: 2.5
Density g/cc: 0.92
Viscosity-cps @ 140C: 4000
Acid Number mg KOH/g: Nil
Physical Form: Diced

725:
Mettler Drop Point: C: 108
F: 226
Hardness dmm: 3.5
Density g/cc: 0.92
Viscosity-cps @ 140C: 1400
Acid Number mg KOH/g: Nil
Physical Form: Diced

735:
Mettler Drop Point: C: 110
F: 230
Hardness dmm: 2.5
Density g/cc: 0.92
Viscosity-cps @ 140C: 6000
Acid Number mg KOH/g: Nil
Physical Form: Diced

1702:
Mettler Drop Point: C: 92
F: 198
Hardness dmm: 90.0
Density g/cc: 0.88
Viscosity-cps @ 140C: 40
Acid Number mg KOH/g: Nil
Physical Form: Grease-like

ALLIED CORP.: A-C Polyethylenes & Copolymers(Continued):

Oxidized Homopolymers:

A-C 629, A-C 629A:
Mettler Drop Point: C: 102
F: 216
Hardness dmm: 5.5
Density g/cc: 0.93
Viscosity-cps @ 140C: 200
Acid Number mg KOH/g: 16
Physical Form: Prills, Powder

655:
Mettler Drop Point: C: 107
F: 225
Hardness dmm: 2.5
Density g/cc: 0.93
Viscosity-cps @ 140C: 210
Acid Number mg KOH/g: 16
Physical Form: Prills

656:
Mettler Drop Point: C: 100
F: 212
Hardness dmm: 9.0
Density g/cc: 0.92
Viscosity-cps @ 140C: 185
Acid Number mg KOH/g: 15
Physical Form: Prills

680:
Mettler Drop Point: C: 110
F: 230
Hardness dmm: 1.5
Density g/cc: 0.94
Viscosity-cps @ 140C: 250
Acid Number mg KOH/g: 16
Physical Form: Prills

ALLIED CORP.: A-C Polyethylenes & Copolymers(Continued):

High Density Oxidized Homopolymers:

A-C 316, A-C 316A:
Mettler Drop Point: C: 140
F: 284
Hardness dmm: <0.5
Density g/cc: 0.98
Viscosity-cps: 8500 (@ 150C)
Acid Number mg KOH/g: 16
Physical Form: Granule, Powder

325:
Mettler Drop Point: C: 137
F: 279
Hardness dmm: <0.5
Density g/cc: 0.99
Viscosity-cps: 4400 (@ 150C)
Acid Number mg KOH/g: 25
Physical Form: Granule

330:
Mettler Drop Point: C: 137
F: 279
Hardness dmm: <0.5
Density g/cc: 0.99
Viscosity-cps: 3600 (@ 150C)
Acid Number mg KOH/g: 30
Physical Form: Granule

392:
Mettler Drop Point: C: 138
F: 280
Hardness dmm: <0.5
Density g/cc: 0.99
Viscosity-cps: 4500 (@ 150C)
Acid Number mg KOH/g: 30
Physical Form: Granule

395:
Mettler Drop Point: C: 137
F: 279
Hardness dmm: <0.5
Density g/cc: 1.00
Viscosity-cps: 2500 (@ 150C)
Acid Number mg KOH/g: 41
Physical Form: Granule

ALLIED CORP.: A-C Polyethylenes & Copolymers(Continued):

Copolymers:

Ethylene-Acrylic Acid:

A-C 540, A-C 540A:
Mettler Drop Point: C: 108
F: 226
Hardness dmm: 2.0
Density g/cc: 0.93
Viscosity-cps @ 140C: 500
Acid Number mg KOH/g: 40
Physical Form: Prills, Powder

580:
Mettler Drop Point: C: 102
F: 216
Hardness dmm: 4.0
Density g/cc: 0.93
Viscosity-cps @ 140C: 650
Acid Number mg KOH/g: 75
Physical Form: Prills

5120:
Mettler Drop Point: C: 92
F: 198
Hardness dmm: 11.5
Density g/cc: 0.93
Viscosity-cps @ 140C: 650
Acid Number mg KOH/g: 120
Physical Form: Prills

ALLIED CORP.: A-C Polyethylenes & Copolymers(Continued):

Copolymers(Continued):

Ethylene-Vinyl Acetate:

A-C 400, A-C 400A:
Mettler Drop Point: C: 95
F: 203
Hardness dmm: 9.5
Density g/cc: 0.92
Viscosity-cps @ 140C: 610
% Vinyl Acetate: 13
Physical Form: Prills, Powder

405(S):
Mettler Drop Point: C: 95
F: 203
Hardness dmm: 7
Density g/cc: 0.92
Viscosity-cps @ 140C: 600
% Vinyl Acetate: 11
Physical Form: Prills

405(M):
Mettler Drop Point: C: 99
F: 210
Hardness dmm: 5
Density g/cc: 0.92
Viscosity-cps @ 140C: 600
% Vinyl Acetate: 8
Physical Form: Prills

405(T):
Mettler Drop Point: C: 103
F: 217
Hardness dmm: 4
Density g/cc: 0.92
Viscosity-cps @ 140C: 600
% Vinyl Acetate: 6
Physical Form: Prills

430:
Mettler Drop Point: C: 60
F: 140
Hardness dmm: 80.0
Density g/cc: 0.93
Viscosity-cps @ 140C: 600
% Vinyl Acetate: 26
Physical Form: Grease-like

ALLIED CORP.: A-C Polyethylenes & Copolymers(Continued):

Micronized Polyethylene Waxes:

POLYMIST A-12:
Mettler Drop Point: C: 136
F: 277
Hardness dmm: <0.5
Density g/cc: 0.99
Average Particle Size (Microns): 12
Acid Number mg KOH/g: 30
Physical Form: Micronized Powder

B-6:
Mettler Drop Point: C: 126
F: 259
Hardness dmm: <0.5
Density g/cc: 0.96
Average Particle Size (Microns): 6
Acid Number mg KOH/g: Nil
Physical Form: Micronized Powder

B-12:
Mettler Drop Point: C: 126
F: 259
Hardness dmm: <0.5
Density g/cc: 0.96
Average Particle Size (Microns): 12
Acid Number mg KOH/g: Nil
Physical Form: Micronized Powder

ALLIED CORP.: A-C Polyethylenes:

General Properties:

High Melting and Softening Point:
Raise the melting point and blocking temperature of waxes with A-C polyethylenes.

Toughness:
A-C polyethylenes are tougher than most natural and synthetic waxes.

Surface Appearance:
In many formulations, A-C polyethylenes can be used to control gloss and improve surface characteristics.

Chemical Resistance:
A-C polyethylenes withstand attack by a wide variety of chemicals including water and grease.

Compatibility:
A-C polyethylenes are compatible with a wide variety of waxes, resins, elastomers and polymers.

Solvent and Oil Gelling:
A-C polyethylenes efficiently gel a wide range of solvents and oils.

Hardness:
At elevated temperatures, A-C polyethylenes remain harder than most natural waxes and paraffins.

Low Melt Viscosity:
A-C polyethylenes provide excellent dispersion of pigments, binders, fillers and other additives, and can be used to modify the melt viscosity of higher molecular weight materials.

Lubricity:
A-C polyethylenes are excellent lubricants in a wide variety of applications.

Advantages to Many Products and Processes:
- Abrasion Resistance
- Increased Lubricity, Release, Slip
- Excellent Barrier Properties
- Good Solvent and Oil Gelation
- Anti-Blocking Action
- Temperature and Viscosity Modification
- Improved Additive Dispersion
- Improved Surface Appearance

DOW CHEMICAL U.S.A.: DOW HDPE Resins:

For Blow Molding/Extrusion/Forming

Designed to offer users the following benefits and advantages:

Easy Processing:
Allows faster cycle times with lower energy input--which increases productivity and cuts energy costs.

Smooth Exterior Finish:
Allows production of containers having excellent printability and/or label adhesion, and at maximum rates.

Superior Consistency:
Eliminates the need for frequent operator adjustments--thus increasing overall productivity.

Lower Volatiles Content:
Provides lower smoke levels in the blow molding environment.

Excellent Physical Properties:
Encourages lightweighting of containers and the use of new, lightweight molds--to decrease resin consumption and increase profits.

New "Ultra-White" Color:
Non-pigmented containers are markedly whiter, while acceptance of color concentrates is improved--yielding colors which are "truer" and more consistent than ever.

Furthermore, all new DOW HDPE resins provide low shrinkage, excellent impact resistance, and low temperature properties combined with high melt strength. These properties enable the user to select the optimum resin for his specific needs.

DOW CHEMICAL CO.: DOW HDPE Resins(Continued):

DOW HDPE Resin 10053-P:
For drums, gasoline tanks, large industrial parts.

Fabrication Method:
Blow Molding, Vacuum Forming

Meets FDA Requirements

Outstanding Properties:
DOW Polyethylene 10053-P is a high molecular weight resin designed specifically for blowmolding large parts. It combines excellent melt strength and good processability with superb consistency to provide fast cycle times and reliable finished parts.

Physical Properties:
Melt Index, (gms/10 min.): 0.08
HLMI, (gms/10 min.): 9.0
Density, (gms/cc): 0.953
Tensile Yield, (lbf/in 2): 3700
Elongation, (%): 650
Flexural Modulus, (lbf/in 2): 160,000
Izod Impact, (ft-lbf/in of notch): 6.0
Tensile Impact, (ft-lbf/in 2): 210
Brittleness Temperature, (C): <-70
Stress Crack Resistance, (hrs.): >500

DOW HDPE Resin 25053-P:
For gas tanks, large industrial parts

Fabrication Method:
Blow Molding, Vacuum Forming

Meets FDA Requirements

Outstanding Properties:
DOW Polyethylene 25053-P has good balance of properties and processing characteristics including outstanding hot melt strength. It is a high density copolymer combining high flexural modulus with superior stress crack resistance and excellent overall toughness.

Physical Properties:
Melt Index, (gms/10 min.): 0.18
Density, (gms/cc): 0.953
Tensile Yield, (lbf/in 2): 3700
Elongation, (%): 650
Flexural Modulus, (lbf/in 2): 160,000
Izod Impact, (ft-lbf/in of notch): 4.1
Tensile Impact, (ft-lbf/in 2): 150
Brittleness Temperature, (C): <-70
Stress Crack Resistance, (hrs.): 400

DOW CHEMICAL CO.: DOW HDPE Resins(Continued):

DOW HDPE Resin 25057-P:
For blown bottles, industrial parts, housewares, miscellaneous blownware.

Fabrication Method:
Blow Molding

Meets FDA Requirements

Outstanding Properties:
DOW Polyethylene 25057-P has good balance of properties and processing characteristics including outstanding hot melt strength. It is a high density copolymer combining high flexural modulus with superior stress crack resistance and excellent overall toughness.

Physical Properties:
Melt Index, (gms/10 min.): 0.30
Density, (gms/cc): 0.954
Tensile Yield, (lbf/in 2): 3800
Elongation, (%): 750
Flexural Modulus, (lbf/in 2): 165,000
Izod Impact, (ft-lbf/in of notch): 3.0
Tensile Impact, (ft-lbf/in 2): 70
Brittleness Temperature, (C): <-70
Stress Crack Resistance, (hrs.): 175

DOW HDPE Resin 35050-P:
For blown bottles, industrial parts, housewares, miscellaneous blownware

Fabrication Method:
Blow Molding

Meets FDA Requirements

Outstanding Properties:
Easy processing copolymer for fast cycle production of high stress crack resistant containers. Meets FDA requirements.

Physical Properties:
Melt Index, (gms/10 min.): 0.35
Density, (gms/cc): 0.954
Tensile Yield, (lbf/in 2): 3800
Elongation, (%): 750
Flexural Modulus, (lbf/in 2): 165,000
Izod Impact, (ft-lbf/in of notch): 3.0
Tensile Impact, (ft-lbf/in 2): 70
Brittleness Temperature, (C): <-70
Stress Crack Resistance, (hrs.): 150

DOW CHEMICAL CO.: DOW HDPE Resins(Continued):

DOW HDPE Resin 50059-P:
For blown bottles, industrial parts, housewares, miscellaneous blownware, sheet forming

Fabrication Method:
Blow Molding

Meets FDA Requirements

Outstanding Properties:
DOW Polyethylene 50059-P has excellent balance of physical and processing characteristics. It is a high density copolymer combining high flexural modulus with excellent crack resistance and toughness.

Physical Properties:
Melt Index, (gms/10 min.): 0.45
Density, (gms/cc): 0.955
Tensile Yield, (lbf/in 2): 3900
Elongation, (%): 800
Flexural Modulus, (lbf/in 2): 170,000
Izod Impact, (ft-lbf/in of notch): 2.0
Tensile Impact, (ft-lbf/in 2): 35
Brittleness Temperature, (C): <-70
Stress Crack Resistance, (hrs.): 100

DOW HDPE Resin 50159-P:
For blown bottles, industrial parts, housewares, miscellaneous blownware, sheet forming

Fabrication Method:
Blow Molding

Meets FDA Requirements

Outstanding Properties:
DOW Polyethylene 50159-P has excellent balance of physical and processing characteristics. It is a high density copolymer combining high flexural modulus with excellent stress crack resistance and toughness.

Physical Properties:
Melt Index, (gms/10 min.): 0.45
Density, (gms/cc): 0.955
Tensile Yield, (lbf/in 2): 3900
Elongation, (%): 800
Flexural Modulus, (lbf/in 2): 170,000
Izod Impact, (ft-lbf/in of notch): 2.0
Tensile Impact, (ft-lbf/in 2): 35
Brittleness Temperature, (C): <-70
Stress Crack Resistance, (hrs.): 100

DOW CHEMICAL CO.: DOW HDPE Resins(Continued):

DOW HDPE Resin 59059-P:
For blown bottles, industrial parts, housewares, miscellaneous blownware, sheet forming

Fabrication Method:
Blow Molding

Meets FDA Requirements

Outstanding Properties:
DOW Polyethylene 59059-P has excellent balance of physical and processing characteristics. It is a high density copolymer combining high flexural modulus with excellent stress crack resistance and toughness.

Physical Properties:
Melt Index, (gms/10 min.): 0.45
Density, (gms/cc): 0.955
Tensile Yield, (lbf/in 2): 3900
Elongation, (%): 800
Flexural Modulus, (lbf/in 2): 170,000
Izod Impact, (ft-lbf/in of notch): 2.0
Tensile Impact, (ft-lbf/in 2): 35
Brittleness Temperature, (C): <-70
Stress Crack Resistance, (hrs.): 100

DOW HDPE Resin 59159-P:
For blown bottles, industrial parts, housewares, miscellaneous blownware, sheet forming

Fabrication Methods:
Blow Molding, Extrusion

Meets FDA Requirements

Outstanding Properties:
DOW Polyethylene 59159-P has excellent balance of physical and processing characteristics. It is a high density copolymer combining high flexural modulus with excellent stress crack resistance and toughness.

Physical Properties:
Melt Index, (gms/10 min.): 0.45
Density, (gms/cc): 0.955
Tensile Yield, (lbf/in 2): 3900
Elongation, (%): 800
Flexural Modulus, (lbf/in 2): 170,000
Izod Impact, (ft-lbf/in of notch): 2.0
Tensile Impact, (ft-lbf/in 2): 35
Brittleness Temperature, (C): <-70
Stress Crack Resistance, (hrs.): 100

DOW CHEMICAL U.S.A.: DOW HDPE Resins(Continued):

DOW HDPE Resin 69065-P:
For blown bottles, especially milk and water bottles

Fabrication Method:
Blow Molding

Meets FDA Requirements

ASTM D1248 Type III, Grade 4

Outstanding Properties:
DOW Polyethylene 69065-P has outstanding melt strength and easy processability, permitting fast production of high quality bottles. The material has excellent rigidity, an attractive appearance, and trims well. It is especially designed to produce light weight gallon bottles of 75 grams and below.

Physical Properties:
Melt Index, (gms/10 min.): 0.60
Density, (gms/cc): 0.961
Tensile Yield, (lbf/in 2): 4400
Elongation, (%): 800
Flexural Modulus, (lbf/in 2): 200,000
Izod Impact, (ft-lbf/in of notch): 2.0
Tensile Impact, (ft-lbf/in 2): 30
Brittleness Temperature, (C): <-70

DOW CHEMICAL U.S.A.: DOWLEX Linear Low Density Polyethylene 2045:

- For heavy duty applications
- FDA compliance
- For blown film extrusion

Melt Index: 1.0
Density: 0.920
Slip Additive: None
Antiblock Additive: None

DOWLEX 2045 resin is a premier film resin for heavy duty applications. DOWLEX 2045 resin is utilized where improved thermal stability over a broader range of processing conditions is desired.

Fabrication Conditions for Blown Film Extrusion:
Melt Temperature: 400-475F
Blow-Up Ratio: 2.5:1
Optimum Gauge Range: 0.5-3.0 mil

This material complies with FDA regulation 21 CFR 177.1520 (c) 3.2 when used unmodified and according to good manufacturing practices for food contact application.

Resin Properties:
Melt Index g/10 min: 1.0
Density, g/cc: 0.920
Tensile Yield, psi (MPa): 1800 (12.4)
Ultimate Tensile, psi (MPa): 3800 (26.2)
Ultimate Elongation, %: 1000
Blown Film Properties @ 1.0 mil:
Dart Impact, g: 275
Elmendorf Tear, g: MD: 375
CD: 750
Tensile Yield, psi (MPa): MD: 1500 (10.3)
CD: 1600 (11.0)
Ultimate Tensile, psi (MPa): MD: 8400 (57.9)
CD: 5800 (40.0)
Ultimate Elongation, %: MD: 600
CD: 750
Gloss, 45: 60
Haze, %: 8

PHILLIPS 66 CO.: MARLEX Polyethylene: Best Resins for Injection Molding--High Density:

Copolymers:

HMN 4550:
Suggested Applications: Agricultural and industrial containers, food handling containers, seating, fuel tanks.
Special Characteristics: High stress crack resistance, outstanding impact strength, good warpage resistance.
ASTM D1248 Classification: Type III
Class A
Category 3
Meets Food and Drug Administration Regulation 177.1520: Yes
Nominal Physical Properties:
Density, ASTM D1505, g/cc: 0.945
Melt Index, ASTM D1238, g/10 min.: 5.0
Environmental Stress Cracking Resistance, ASTM D1693, F50, h:
Condition A: 30
Condition B: 40
Tensile Strength Yield, ASTM D638, psi(MPa): 3200(22)
Elongation, ASTM D638, %: >400
Flexural Modulus, psi (MPa): 150,000(1030)
Recommended Processing Temperatures, F(C) Stock: 425-525 (218-274)

HMN 5060:
Suggested Applications: Industrial containers, fuel tanks, closures, feeder tubs.
Special Characteristics: High stress crack resistance, good impact and warpage resistance.
ASTM D1248 Classification: Type III
Class A
Category 3
Meets Food and Drug Administration Regulation 177.1520: Yes
Nominal Physical Properties:
Density, ASTM D1505, g/cc: 0.950
Melt Index, ASTM D1238, g/10 min.: 6.0
Environmental Stress Cracking Resistance, ASTM D1693, F50, h:
Condition A: 15
Condition B: 15
Tensile Strength Yield, ASTM D638, psi(MPa): 3600(25)
Elongation, ASTM D638, %: >400
Flexural Modulus, ASTM D790, psi(MPa): 175,000(1210)
Recommended Processing Temperatures, F(C) Stock: 425-525 (218-274)

PHILLIPS 66 CO.: MARLEX Polyethylene: Best Resins for Injection Molding--High Density(Continued):

Copolymers(Continued):

HMN 54140:

Suggested Applications: Industrial containers, crates and boxes, large frozen food containers.

Special Characteristics: Good impact strength even at low temperatures, fast molding cycle, good warpage resistance.

ASTM D1248 Classification: Type III
Class A
Category 2

Meets Food and Drug Administration Regulation 177.1520: Yes

Nominal Physical Properties:

Density, ASTM D1505, g/cc: 0.954
Melt Index, ASTM D1238, g/10 min.: 14
Environmental Stress Cracking Resistance, ASTM D1693, F50, h:
Condition A: 3
Condition B: 6
Tensile Strength Yield, ASTM D638, psi (MPa): 3900(27)
Elongation, ASTM D638, Type IV, %: 200
Flexural Modulus, ASTM D790, psi (MPa): 195,000(1340)
Recommended Processing Temperatures, F(C) Stock: 400-500 (204-260)

HMN 55180:

Suggested Applications: Milk cases, tote boxes, automotive valence panels, high quality housewares, shipping containers.

Special Characteristics: Excellent impact strength and warpage resistance, high surface gloss.

ASTM D1248 Classification: Type III
Class A
Category 2

Meets Food and Drug Administration 177.1520: Yes

Nominal Physical Properties:

Density, ASTM D1505, g/cc: 0.955
Melt Index, ASTM D1238, g/10 min.: 20
Environmental Stress Cracking Resistance, ASTM D1693, F50, h:
Condition A: Broke on Bending
Condition B: Broke on Bending
Tensile Strength Yield, ASTM D638, psi(MPa): 4000(28)
Elongation, ASTM D638, Type IV, %: 125
Flexural Modulus, ASTM D790, psi(MPa): 200,000(1380)
Recommended Processing Temperatures, F(C) Stock: 400-500 (204-260)

PHILLIPS 66 CO.: MARLEX Polyethylenes: Best Resins for Injection Molding--High Density(Continued):

Copolymers(Continued):

HMN 55100:
Suggested Applications: Pails, housewares, closures, crates requiring good toughness.
Special Characteristics: High stiffness, excellent surface appearance, good impact strength, good warpage resistance.
ASTM D1248 Classification: Type III
Class A
Category 3
Meets Food and Drug Administration Regulation 177.1520: Yes
Nominal Physical Properties:
Density, ASTM D1505, g/cc: 0.955
Melt Index, ASTM D1238, g/10 min.: 9.5
Environmental Stress Cracking Resistance, ASTM D1693, F50, h:
Condition A: <10
Condition B: <10
Tensile Strength Yield, ASTM D638: psi (MPa): 4000(28)
Elongation ASTM D638, Type IV, %: >200
Flexural Modulus, ASTM D790, psi (MPa): 200,000(1380)
Recommended Processing Temperatures, F(C) Stock: 425-525 (218-274)

BMN TR-880:
Special Applications: Milk cases, tote boxes, automotive and industrial components, high quality housewares.
Special Characteristics: Excellent impact strength and warpage resistance, good production rate.
ASTM D1248 Classification: Type III
Class A
Category 2
Meets Food and Drug Administration Regulation 177.1520: Yes
Nominal Physical Properties:
Density, ASTM D1505, g/cc: 0.956
Melt Index, ASTM D1238, g/10 min.: 18
Environmental Stress Cracking Resistance, ASTM D1693, F50, h:
Condition A: <1
Condition B: <10
Tensile Strength Yield, ASTM D638, psi(MPa): 4100(28)
Elongation, ASTM D638, Type IV, %: 200
Flexural Modulus, ASTM D790, psi (MPa): 205,000(1410)
Recommended Processing Temperatures, F(C) Stock: 400-500 (204-260)

PHILLIPS 66 CO.: MARLEX Polyethylenes: Best Resins for Injection Molding--High Density(Continued):

Copolymers(Continued):

HMN 5580:
Suggested Applications: Pails, housewares, closures, crates requiring good toughness.
Special Characteristics: High stiffness, excellent surface appearance, good impact strength, good warpage resistance.
ASTM D1248 Classification: Type III
Class A
Category 3
Meets Food and Drug Administration Regulation 177.1520: Yes
Nominal Physical Properties:
Density, ASTM D1505, g/cc: 0.956
Melt Index, ASTM D1238, g/10 min.: 8.5
Environmental Stress Cracking Resistance, ASTM D1693, F50, h:
Condition A: 10
Condition B: 10
Tensile Strength Yield, ASTM D638, psi(MPa): 4100(28)
Elongation, ASTM D638, Type IV, %: >400
Flexural Modulus, ASTM D790, psi(MPa): 205,000(1410)
Recommended Processing Temperatures, F(C) Stock: 425-525 (218-274)

BMN 55500:
Suggested Applications: Thin wall containers, toys, overcaps.
Special Characteristics: High rigidity, easy processing, high production rate, very low odor.
ASTM D1248 Classification: Type III
Class A
Category 1
Meets Food and Drug Administration Regulation 177.1520: Yes
Nominal Physical Properties:
Density, ASTM D1505, g/cc: 0.956
Melt Index, ASTM D1238, g/10 min.: 48
Environmental Stress Cracking Resistance, ASTM D1693, F50, h:
Condition A: Broke on Bending
Condition B: Broke on Bending
Tensile Strength Yield, ASTM D638, psi(MPa): 4100(28)
Elongation, ASTM D638, Type IV, %: 7
Flexural Modulus, ASTM D790, psi(MPa): 205,000(1410)
Recommended Processing Temperatures, F(C) Stock: 400-500 (204-260)

PHILLIPS 66 CO.: MARLEX Polyethylenes: Best Resins for Injection Molding--High Density(Continued):

Copolymers(Continued):

HMN 6060:
Suggested Applications: Trays, industrial parts, beverage crates, safety helmets.
Special Characteristics: High stiffness, excellent surface appearance, good impact strength even at low temperatures.
ASTM D1248 Classification: Type IV
Class A
Category 3
Meets Food and Drug Administration Regulation 177.1520: Yes
Nominal Physical Properties:
Density, ASTM D1505, g/cc: 0.963
Melt Index, ASTM D1238, g/10 min.: 7.5
Environmental Stress Cracking Resistance, ASTM D1693, F50, h:
Condition A: 10
Condition B: 10
Tensile Strength Yield, ASTM D638, psi(MPa): 4500(31)
Elongation, ASTM D638, Type IV, %: 300
Flexural Modulus, ASTM D790, psi (MPa): 240,000(1650)
Recommmended Processing Temperatures, F(C) Stock: 400-500 (204-260)

Homopolymer:

EMN TR-885:
Suggested Applications: Thin walled containers where higher production rate and rigidity is required.
Special Characteristics: High production rates, maximum stiffness, easy processing.
ASTM D1248 Classification: Type IV
Class A
Category 1
Meets Food and Drug Administration Regulation 177.1520: Yes
Nominal Physical Properties:
Density, ASTM D1505, g/cc: 0.967
Melt Index, ASTM D1238, g/10 min.: 33
Environmental Stress Cracking Resistance, ASTM D1693, F50, h:
Condition A: <1
Condition B: <1
Tensile Strength, ASTM D638, psi(MPa): 4500(31)
Elongation, ASTM D638, Type IV, %: 10
Flexural Modulus, ASTM D790, psi(MPa): 260,000(1790)
Recommended Processing Temperatures, F(C) Stock: 400-500 (204-260)

PHILLIPS 66 CO.: MARLEX Polyethylenes: Best Resins for Blow Molding--High Density:

HHM 4903:
Suggested Applications: Large industrial containers, fuel tanks, automotive parts
Special Characteristics: Ease of processing, exceptional stress cracking resistance, excellent surface appearance, good melt strength
ASTM D1248 Classification: Type III
Class A
Category 5
Meets Food and Drug Administration 177.1520: Yes
Nominal Physical Properties:
Density, ASTM D1505, g/cc: 0.949
Melt Index, ASTM D1238, g/10 min: 0.3
Environmental Stress Cracking Resistance, ASTM D1693, F50, h:
Condition A: 500
Condition B: 500
Tensile Strength Yield, ASTM D638, psi(MPa): 3600(25)
Elongation, ASTM D638, %: >600
Flexural Modulus, ASTM D790, psi(MPa): 170M(1171)
Recommended Processing Temperature:
Stock Temperature, F(C): 370-420(188-216)

HXM 50100:
Suggested Applications: 55-gallon shipping containers, gasoline and chemical tanks
Special Characteristics: Excellent stress cracking resistance, good melt strength, excellent impact strength even at low temperatures.
ASTM D1248 Classification: Type III
Class A
Category 5
Meets Food and Drug Administration Regulation 177.1520: Yes
Nominal Physical Properties:
Density, ASTM D1505, g/cc: 0.950
Melt Index, ASTM D1238, g/10 min: 10 HLMI (190/21.60)
Environmental Stress Cracking Resistance, ASTM D1693, F50, h:
Condition A: >600
Condition B: >600
Tensile Strength Yield, ASTM D638, psi(MPa): 3800(26)
Elongation, ASTM D638, %: >600
Flexural Modulus, ASTM D790, psi(MPa): 175M(1206)
Recommended Processing Temperature:
Stock Temperature, F(C): 370-420(188-216)

PHILLIPS 66 CO.: MARLEX Polyethylenes: Best Resins for Blow Molding--High Density(Continued):

HXM TR-550:
Suggested Applications: 55 gallon drums (specifically with built-in handling rings), industrial tanks
Special Characteristics: Outstanding impact and creep resistance, excellent ESCR and chemical resistance
ASTM D1248 Classification: Type III
Class A
Category 5
Meets Food and Drug Administration Regulation 177.1520: Yes
Nominal Physical Properties:
Density, ASTM D1505, g/cc: 0.951
Melt Index, ASTM D1238, g/10 min: 2.0 HLMI (190/21.60)
Environmental Stress Cracking Resistance, ASTM D1693, F50, h:
Condition A: >1000
Condition B: >1000
Tensile Strength Yield, ASTM D638, psi(MPa): 4000(28)
Elongation, ASTM D638, %: >800
Flexural Modulus, ASTM D790, psi(MPa): 185M(1275)
Recommended Processing Temperature:
Stock Temperature, F(C): 380-415(193-213)

HHM 5202:
Suggested Applications: Bleach and detergent containers, chemical packaging
Special Characteristics: Good stiffness and impact strength, excellent container environmental stress cracking resistance
ASTM D1248 Classification: Type III
Class A
Category 5
Meets Food and Drug Administration Regulation 177.1520: Yes
Nominal Physical Properties:
Density, ASTM D1505, g/cc: 0.952
Melt Index, ASTM D1238, g/10 min: 0.35
Environmental Stress Cracking Resistance, ASTM D1693, F50, h:
Condition A: 50
Condition B: 50
Tensile Strength, Yield, ASTM D638, psi(MPa): 3900(27)
Elongation, ASTM D638, %: >600
Flexural Modulus, ASTM D790, psi(MPa): 190M(1309)
Recommended Processing Temperature:
Stock Temperature, F(C): 360-400(182-204)

PHILLIPS 66 CO.: MARLEX Polyethylenes: Best Resins for Blow Molding--High Density(Continued):

HXM TR-570:
Suggested Applications: 55 gallon drums, industrial tanks
Special Characteristics: Outstanding impact, creep resistance, and stiffness, excellent ESCR and chemical resistance
ASTM D1248 Classification: Type III
Class A
Category 5
Meets Food and Drug Administration Regulation 177.1520: Yes
Nominal Physical Properties:
Density, ASTM D1505, g/cc: 0.953
Melt Index, ASTM D1238, g/10 min: 5.0 HLMI (190/21.60)
Environmental Stress Cracking Resistance, ASTM D1693, F50, h:
Condition A: >1000
Condition B: >1000
Tensile Strength Yield, ASTM D638, psi(MPa): 3800(26)
Elongation, ASTM D638, %: >600
Flexural Modulus, ASTM D790, psi(MPa): 186M(1280)
Recommended Processing Temperature:
Stock Temperature, F(C): 380-415(193-213)

HHM 5502:
Suggested Applications: Bottles for bleach and detergents, industrial chemicals, industrial parts, ice chests and coolers--injection blow molding applications
Special Characteristics: Good balance of environmental stress cracking resistance and stiffness
ASTM D1248 Classification: Type III
Class A
Category 5
Meets Food and Drug Administration Regulation 177.1520: Yes
Nominal Physical Properties:
Density, ASTM D1505, g/cc: 0.955
Melt Index, ASTM D1238, g/10 min: 0.35
Environmental Stress Cracking Resistance, ASTM D1693, F50, h:
Condition A: 45
Condition B: 35
Tensile Strength Yield, ASTM D638, psi(MPa): 4000(28)
Elongation, ASTM D638, %: >600
Flexural Modulus, ASTM D790, psi(MPa): 200M(1378)
Recommended Processing Temperature:
Stock Temperature, F(C): 360-400(182-204)

PHILLIPS 66 CO.: MARLEX Polyethylenes: Best Resins for Blow Molding--High Density(Continued):

HHN 5710:
Suggested Applications: Small bottles, injection blow molding applications
Special Characteristics: High gloss, high productivity, excellent impact strength
ASTM D1248 Classification: Type III
Class A
Category 3
Meets Food and Drug Administration Regulation 177.1520: Yes
Nominal Physical Properties:
Density, ASTM D1505, g/cc: 0.957
Melt Index, ASTM D1238, g/10 min: 1.0
Environmental Stress Cracking Resistance, ASTM D1693, F50, h:
Condition A: 30
Condition B: 20
Tensile Strength Yield, ASTM D638, psi(MPa): 4100(28)
Elongation, ASTM D638, %: >800
Flexural Modulus, ASTM D790, psi(MPa): 225M(1550)
Recommended Processing Temperature:
Stock Temperature, F(C): 430-470(221-243)

EHM 6007:
Suggested Applications: Lightweight containers for milk, distilled water, fruit juices, soft drink concentrates
Special Characteristics: Good impact strength and stiffness for critical food packaging jobs
ASTM D1248 Classification: Type IV
Class A
Category 4
Meets Food and Drug Administration Regulation 177.1520: Yes
Nominal Physical Properties:
Density, ASTM D1505, g/cc: 0.964
Melt Index, ASTM D1238, g/10 min: 0.75
Environmental Stress Cracking Resistance, ASTM D1693, F50, h:
Condition A: 15-20
Condition B: 10
Tensile Strength Yield, ASTM D638, psi(MPa): 4400(30)
Elongation, ASTM D638, %: >300
Flexural Modulus, ASTM D790, psi (MPa): 240M(1654)
Recommended Processing Temperature:
Stock Temperature, F(C): 360-400(182-204)

PHILLIPS 66 CO.: MARLEX Polyethylenes: Best Resins for Blow Molding--High Density(Continued):

Mineral Reinforced:

ER9-0020:
Suggested Applications: Structural automotive applications, seating, shrouds, housings
Special Characteristics: Excellent rigidity and toughness, warpage resistance, dimensional stability, heat resistance
ASTM D1248 Classification: NA
Meets Food and Drug Administration Regulation 177.1520: No
Nominal Physical Properties:
Density, ASTM D1505, g/cc: 1.12
Melt Index, ASTM D1238, g/10 min: 9 HLMI (190/21.60)
Tensile Strength Yield, ASTM D638, psi(MPa): 6100(42)
Elongation, ASTM D638, %: 10
Flexural Modulus, ASTM D790, psi(MPa): 500M(3445)
Recommended Processing Temperature:
Stock Temperature, F(C): 370-420(188-216)

PHILLIPS 66 CO.: MARLEX Polyethylenes: Best Resins for Sheet and Thermoforming--High Density:

HXM 50100:
Suggested Applications: Large formed parts, cattle feeders, pallets, boats
Special Characteristics: Excellent stress cracking resistance, good melt strength, excellent impact strength even at low temperatures
ASTM D1248 Classification: Type III
Class A
Category 5
Meets Applicable Food and Drug Administration Regulations for Food Packaging: Yes
Nominal Physical Properties:
Density, ASTM D1505, g/cc: 0.950
Melt Index, ASTM D1238, g/10 min.: 10 HLMI (190/21.60)
Environmental Stress Cracking Resistance, ASTM D1693, F50, h:
Condition A: >600
Condition B: >600
Tensile Strength at Yield, ASTM D638, psi(MPa): 3800(26)
Elongation, ASTM D638, %: >600
Flexural Modulus, ASTM D790, psi(MPa): 175M(2080)
Sheet Sag Characteristics, in.(cm): 3-5(8-13)
Recommended Proccessing Temperatures, F(C):
Extrusion Stock: 440-500(227-260)
Thermoforming Surface: 300-350(149-177)

HHM 4903:
Suggested Applications: Tote Boxes, housing, trays
Special Characteristics: Exceptional stress cracking resistance, ease of processing, excellent surface appearance
ASTM D1248 Classification: Type III
Class A
Category 5
Meets Applicable Food and Drug Administration Regulations for Food Packaging: Yes
Nominal Physical Properties:
Density, ASTM D1505, g/cc: 0.949
Melt Index, ASTM D1238, g/10 min.: 0.30
Environmental Stress Cracking Resistance, ASTM D1693, F50, h:
Condition A: 500
Condition B: 500
Tensile Strength at Yield, ASTM D638, psi(mPa): 3600(25)
Elongation, ASTM D638, %: >600
Flexural Modulus, ASTM D790, psi(MPa): 170M(1165)
Sheet Sag Characteristics, in.(cm): 10-14(25-36)
Recommended Processing Temperatures, F(C):
Extrusion Stock: 440-500(227-260)
Thermoforming Surface: 300-350(149-177)

PHILLIPS 66 CO.: MARLEX Polyethylenes: Best Resins for Sheet and Thermoforming--High Density(Continued):

HMM 5202:
Suggested Applications: Tote boxes, trays, industrial housings, shrouds
Special Characteristics: Excellent ESCR, good stiffness and impact strength
ASTM D1248 Classification: Type III
Class A
Category 5
Meets Applicable Food and Drug Administration Regulations for Food Packaging: Yes
Nominal Physical Properties:
Density, ASTM D1505, g/cc: 0.952
Melt Index, ASTM D1238, g/10 min.: 0.35
Environmental Stress Cracking Resistance, ASTM D1693, F50, h:
Condition A: 50
Condition B: 50
Tensile Strength at Yield, ASTM D638, psi(MPa): 3900(27)
Elongation, ASTM D638, %: >600
Flexural Modulus, ASTM D790, psi(MPa): 190M(1309)
Sheet Sag Characteristics, in(cm): 7-9(18-23)
Recommended Processing Temperatures, F(C):
Extrusion Stock: 440-500(227-260)
Thermoforming Surface: 300-350(149-177)

HHM 5502:
Suggested Applications: Liners, trays, tote boxes
Special Characteristics: Good balance of ESCR and stiffness. Medium sheet sag during forming
ASTM D1248 Classification: Type III
Class A
Category 5
Meets Applicable Food and Drug Administration Regulations for Food Packaging: Yes
Nominal Physical Properties:
Density, ASTM D1505, g/cc: 0.955
Melt Index, ASTM D1238, g/10 min.: 0.35
Environmental Stress Cracking Resistance, ASTM D1693, F50, h:
Condition A: 45
Condition B: 35
Tensile Strength at Yield, ASTM D638, psi(MPa): 4000(28)
Elongation, ASTM D638, %: >600
Flexural Modulus, ASTM D790, psi(MPa): 200M(1380)
Sheet Sag Characteristics, in.(cm): 7-9(18-23)
Recommended Processing Temperatures, F(C):
Extrusion Stock: 440-500(227-260)
Thermoforming Surface: 300-350(149-177)

PHILLIPS 66 CO.: MARLEX Polyethylenes: Best Resins for Sheet and Thermoforming--High Density(Continued):

HHM TR-400:
Suggested Applications: Pond liners, gas and chemical tank containment liners, landfill liners
Special Characteristics: Excellent melt strength, outstanding stress cracking resistance, broad fusion range
ASTM D1248 Classification: Type II
Class A
Category 5
Meets Applicable Food and Drug Administration Regulations for Food Packaging: NA
Nominal Physical Properties:
Density, ASTM D1505, g/cc: 0.939
Melt Index, ASTM D1238, g/10 min.: 0.15
Environmental Stress Cracking Resistance, ASTM D1693, F50, h:
Condition A: <1000 (Cond. A, B, C)
Tensile Strength at Yield, ASTM D638, psi(MPa): 2800(19)
Elongation, ASTM D638, %: >500
Flexural Modulus, ASTM D790, psi(MPa): 90M(620)
Recommended Processing Temperatures, F(C):
Extrusion Stock: 420-460(216-238)

Mineral Reinforced:

ER9-0020:
Suggested Applications: Structural automotive applications, seating, shrouds, housings
Special Characteristics: Excellent rigidity and toughness, warpage resistance, dimensional stability, heat resistance
ASTM D1248 Classification: NA
Meets Applicable Food and Drug Administration Regulations for Food Packaging: No
Nominal Physical Properties:
Density, ASTM D1505, g/cc: 1.12
Melt Index, ASTM D1238, g/10 min.: 9 HLMI(190/21.60)
Tensile Strength at Yield, ASTM D638, psi(MPa): 6100(42)
Elongation, ASTM D638, %: 10
Flexural Modulus, ASTM D790, psi(MPa): 500M(3445)
Sheet Sag Characteristics, in(cm): 3-5(8-13)
Recommended Processing Temperatures, F(C)):
Extrusion Stock: 420-460(216-238)
Thermoforming Surface: 300-350(149-177)

PHILLIPS 66 CO.: MARLEX Polyethylenes: CL-200 Second Generation Crosslinkable Compounds for Rotational Molding:

Physical Properties:

CL-200:

3/4 Inch Specimen: (60 Minutes at 500F): Bubbles: None

1/8 Inch Specimen (600F):

Density (natural), g/cc:

8 Minutes:	0.944
10	0.941
12	0.941
14	0.941

Tensile Yield, psi:

8 Minutes:	2800
10	2700
12	2600
14	2600

Ultimate Elongation, %:

8 Minutes:	500
10	500
12	450
14	450

Flexural Modulus, psi:

8 Minutes:	110,000
10	100,000
12	100,000
14	100,000

Vicat Softening Temperature, F:

8 Minutes:	255
10	254
12	253
14	254

ESCR (Condition A, 10% Igepal), F50, Hours:

8 Minutes:	>1000
10	>1000
12	>1000
14	>1000

PHILLIPS 66 CO.: MARLEX Polyethylenes: CL-200 Second Generation Crosslinkable Compounds for Rotational Molding(Continued):

Physical Properties:

CL-100:
3/4 inch specimen: (60 Minutes at 500F): Bubbles: None
1/8 inch specimen (600F):
Density (natural), g/cc:
8 Minutes: 0.950
10 : 0.940
12 : 0.940
14 : 0.940
Tensile Yield, psi:
8 Minutes: 3400
10 : 2700
12 : 2600
14 : 2600
Ultimate Elongation, %:
8 Minutes: 100
10 : 600
12 : 500
14 : 450
Flexural Modulus, psi:
8 Minutes: 150,000
10 : 110,000
12 : 100,000
14 : 100,000
Vicat Softening Temperature, F:
8 Minutes: 258
10 257
12 255
14 256
ESCR (Condition A, 10% Igepal), F50, Hours:
8 Minutes: <24
10 : >1000
12 : >1000
14 : >1000

MARLEX CL-200 JN and CL-200 B crosslinkable polyethylene compounds perform similarly to CL-100 compounds in most regards. Processing can be performed without machine or mold changes except where improved release characteristics may necessitate release adjustments. Thin wall containers can be molded at significantly shorter cycles with CL-200 compounds and achieve comparable impact and standard physical property performance. Large, thick wall containers can be molded with less concern of bubbling.

QUANTUM: PETROTHENE Linear Low Density Polyethylene for Film Extrusion:

GA 501:
Density: 0.918
Melt Index, (190/2.16): g/10 min.: 1.0
Comonomer: Butene
Gauge: 1.5
Blow-up Ratio: 2.1
Tensile Strength @ Break: MD: psi: 5,800
TD: psi: 4,600
Elongation @ Break: MD: %: 600
TD: %: 760
Modulus, 1% Secant: MD: psi: 27,000
TD: psi: 35,000
Elmendorf Tear: MD: grams: 160
TD: grams: 560
Dart Impact: grams: 145
Haze: %: 11
Gloss, 45: 50
Applications: Heavy duty shipping sacks, liners, consumer packaging
Key Properties: Excellent puncture resistance, elongation and heat seal strength

GA 502:
Density: g/cm 3: 0.918
Melt Index, (190/2.16): g/10 min.: 2.0
Comonomer: Butene
Gauge: mil: 1.5
Blow-up Ratio: 2.1
Tensile Strength @ Break: MD: psi: 4,900
TD: psi: 3,600
Elongation @ Break: MD: %: 750
TD: %: 800
Modulus, 1% Secant: MD: psi: 32,000
TD: psi: 36,000
Elmendorf Tear: MD: grams: 170
TD: 400
Dart Impact: grams: 120
Haze: %: 12
Gloss, 45: 60
Applications: Garment, laundry, and produce bags, liners
Key Properties: Excellent puncture resistance, elongation and heat seal strength

QUANTUM: PETROTHENE Linear Low Density Polyethylene for Film Extrusion(Continued):

GA 601:

Density: g/cm 3: 0.918
Melt Index, (190/2.16): g/10 min.: 1.0
Comonomer: Hexene
Gauge: mil: 1.25
Blow-up Ratio: 2.2
Tensile Strength @ Break: MD: psi: 6,100
TD: psi: 4,800
Elongation @ Break: MD: %: 500
TD: %: 600
Modulus, 1% Secant: MD: psi: 29,500
TD: psi: 35,500
Elmendorf Tear: MD: grams: 400
TD: grams: 750
Dart Impact: %: 200
Haze: %: 12
Gloss, 45: 50
Applications: Stretch film, frozen food packaging, shipping sacks
Key Properties: Excellent film strength, drawdown and toughness

GA 604:

Density: g/cm 3: 0.916
Melt Index, (190/2.16): g/10 min.: 2.5
Comonomer: Hexene
Gauge: mil: 1.25
Blow-up Ratio: 2.2
Tensile Strength @ Break: MD: psi: 6,400
TD: psi: 5,100
Elongation @ Break: MD: %: 650
TD: %: 750
Modulus, 1% Secant: MD: psi: 26,000
TD: psi: 33,000
Elmendorf Tear: MD: grams: 350
TD: 700
Dart Impact: grams: 175
Haze: %: 19
Gloss, 45: 30
Applications: Blown film for food and consumer packaging, cast stretch film
Key Properties: Superior strength and toughness, drawdown

QUANTUM: PETROTHENE Linear Low Density Polyethylene for Film Extrusion (Continued):

GA 605:
Density: g/cm 3: 0.926
Melt Index, (190/2.16): g/10 min.: 0.8
Comonomer: Hexene
Gauge: mil: 1.25
Blow-up Ratio: 2.2
Tensile Strength @ Break: MD: psi: 6,600
TD: psi: 4,600
Elongation @ Break: MD: %: 500
TD: %: 600
Modulus, 1% Secant: MD: psi: 42,000
TD: psi: 50,000
Elmendorf Tear: MD: grams: 230
TD: 760
Dart Impact: grams: 150
Haze: %: 14
Gloss, 45: 50
Applications: Shipping and grocery sacks, industrial and consumer packaging
Key Properties: Excellent film strength and toughness, heat seal, stiffness and drawdown

GB 501:
Density: g/cm 3: 0.919
Melt Index, (190/2.16): g/10 min.: 1.0
Comonomer: Butene
Gauge: mil: 1.5
Blow-up Ratio: 2.2
Tensile Strength @ Break: MD: psi: 5,600
TD: psi: 3,900
Elongation @ Break: MD: %: 550
TD: %: 700
Modulus, 1% Secant: MD: psi: 33,000
TD: psi: 39,000
Elmendorf Tear: MD: grams: 180
TD: 580
Dart Impact: grams: 150
Haze: %: 15
Gloss, 45: 40
Applications: Heavy duty shipping sacks, liners, consumer packaging
Key Properties: Excellent puncture resistance, elongation and heat seal strength

QUANTUM: PETROTHENE Linear Low Density Polyethylene for Film Extrusion(Continued):

GB 502:

Density: g/cm 3: 0.919
Melt Index (190/2.16): g/10 min.: 2.0
Comonomer: Butene
Gauge: mil: 1.5
Blow-up Ratio: 2.2
Tensile Strength @ Break: MD: psi: 4,600
TD: psi: 3,400
Elongation @ Break: MD: %: 650
TD: %: 720
Modulus, 1% Secant: MD: psi: 30,000
TD: psi: 36,000
Elmendorf Tear: MD: grams: 220
TD: 420
Dart Impact: grams: 120
Haze: %: 15
Gloss, 45: 50
Applications: Garment laundry, and produce bags, liners
Key Properties: Excellent puncture resistance, elongation and heat seal strength

QUANTUM: PETROTHENE Low Density Polyethylene for Film:

High Clarity Copolymers:

NA 420:
Melt Index, g/10 min.: 2.5
Density, g/cm 3: 0.927
% Vinyl Acetate Incorporated: 2.5
Haze, %: 5.0
Gloss, 45: 70
Impact Strength, Drop Dart, F50, g: 90
Modulus, 1% Secant, psi: MD: 20,000
TD: 23,000
Tensile Strength @ Break, psi: MD: 3,000
TD: 2,500
Elongation @ Break, %: MD: 320
TD: 540
Minimum Thickness, mils: 0.75
Previous Designation: PE 420
Applications: Light produce, textile bags, thin film
Key Properties: High clarity, excellent impact strength

NA 314:
Melt Index, g/10 min.: 2.0
Density, g/cm 3: 0.926
% Vinyl Acetate Incorporated: 2.0
Haze, %: 5.5
Gloss, 45: 69
Impact Strength, Drop Dart, F50, g: 70
Modulus, 1% Secant, psi: MD: 23,000
TD: 28,000
Tensile Strength @ Break, psi: MD: 3,000
TD: 2,400
Elongation @ Break, %: MD: 330
TD: 530
Minimum Thickness, mils: 1.0
Previous Designation: PE 3104
Applications: Light produce, textile bags, pouches
Key Properties: High clarity, good impact strength

QUANTUM: PETROTHENE Low Density Polyethylene for Film (Continued):

High Clarity Copolymers(Continued):

NA 304:
Melt Index, g/10 min.: 2.0
Density, g/cm 3: 0.927
% Vinyl Acetate Incorporated: 3.0
Haze, %: 4.5
Gloss, 45: 74
Impact Strength, Drop Dart, F50, g: 80
Modulus, 1% Secant, psi: MD: 22,500
TD: 26,000
Tensile Strength @ Break, psi: MD: 3,300
TD: 2,800
Elongation @ Break, %: MD: 350
TD: 570
Minimum Thickness, mils: 1.0
Previous Designation: PE 3004
Applications: Light produce, textile bags
Key Properties: High clarity, excellent impact strength

NA 440:
Melt Index, g/10 min.: 2.5
Density, g/cm 3: 0.928
% Vinyl Acetate Incorporated: 4.0
Haze, %: 5.0
Gloss, 45: 72
Impact Strength, Drop Dart, F50, g: 120
Modulus, 1% Secant, psi: MD: 19,000
TD: 21,000
Tensile Strength @ Break, psi: MD: 3,100
TD: 2,400
Elongation @ Break, %: MD: 350
TD: 520
Minimum Thickness, mils: N/A
Previous Designation: PE 440
Applications: High clarity packaging
Key Properties: Excellent optics, processability

QUANTUM: PETROTHENE Low Density Polyethylene for Film (Continued):

High Clarity Copolymers(Continued):

NA 316:
Melt Index, g/10 min.: 1.3
Density, g/cm 3: 0.928
% Vinyl Acetate Incorporated: 6.0
Haze, %: 4.0
Gloss, 45: 74
Impact Strength, Drop Dart, F50, g: 140
Modulus, 1% Secant, psi: MD: 18,000
TD: 20,000
Tensile Strength @ Break, psi: MD: 3,500
TD: 3,100
Elongation @ Break, %: MD: 440
TD: 520
Minimum Thickness, mils: 1.1
Previous Designation: PE 3106
Applications: General purpose packaging
Key Properties: Superior optics, excellent toughness

High Clarity--High Impact:

NA 441:
Melt Index, g/10 min.: 1.0
Density, g/cm 3: 0.928
% Vinyl Acetate Incorporated: 4.0
Haze, %: 5.8
Gloss, 45: 70
Impact Strength, Drop Dart, F50, g: 140
Modulus, 1% Secant, psi: MD: 18,000
TD: 19,000
Previous Designation: PE 441
Applications: Heavy produce, frozen food, textile bags
Key Properties: High clarity, excellent impact strength

NA 340:
Melt Index, g/10 min.: 1.0
Density, g/cm 3: 0.928
% Vinyl Acetate Incorporated: 4.5
Haze, %: 5.0
Gloss, 45: 70
Impact Strength, Drop Dart, F50, g: 130
Modulus 1% Secant, psi: MD: 21,000
TD: 24,000
Tensile Strength @ Break, psi: MD: 2,700
TD: 2,400
Elongation @ Break, %: MD: 380
TD: 550
Minimum Thickness, mils: 1.25
Previous Designation: PE 3040
Applications: Heavy produce, frozen food, textile bags
Key Properties: High clarity, excellent impact strength

QUANTUM: PETROTHENE Low Density Polyethylene for Film (Continued):

High Clarity Hompolymers:

NA 346:
Melt Index, g/10 min.: 3.6
Density, g/cm 3: 0.922
Haze, %: 4.0
Gloss, 45: 80
Impact Strength, Drop Dart, F50, g: 80
Modulus, 1% Secant, psi: MD: 25,000
TD: 29,000
Tensile Strength @ Break, psi: MD: 3,200
TD: 2,700
Elongation @ Break, %: MD: 340
TD: 500
Minimum Thickness, mils: 0.5
Previous Designation: PE 3405C
Applications: High clarity packaging
Key Properties: High clarity, stiffness

NA 320:
Melt Index, g/10 min.: 2.5
Density, g/cm 3: 0.925
% Vinyl Acetate Incorporated: 0.75
Haze, %: 5.7
Gloss, 45: 68
Impact Strength, Drop Dart, F50, g: 70
Modulus, 1% Secant, psi: MD: 29,000
TD: 31,000
Tensile Strength @ Break, psi: MD: 3,100
TD: 2,300
Elongation @ Break, %: MD: 290
TD: 540
Minimum Thickness, mils: 0.6
Previous Designation: PE 320
Applications: Counter merchandise, food bags, bundling
Key Properties: Good clarity

QUANTUM: PETROTHENE Low Density Polyethylene for Film (Continued):

High Clarity Homopolymers(Continued):

NA 341:
Melt Index, g/10 min.: 1.2
Density g/cm 3: 0.922
Haze, %: 5.5
Gloss, 45: 71
Impact Strength, Drop Dart, F50, g: 75
Modulus, 1% Secant, psi: MD: 26,000
TD: 29,000
Tensile Strength @ Break, psi: MD: 3,500
TD: 2,800
Elongation @ Break, %: MD: 310
TD: 520
Minimum Thickness, mils: 1.1
Previous Designation: PE 3401
Applications: Clarity bundling
Key Properties: Clarity, melt strength

NA 345:
Melt Index, g/10 min.: 1.8
Density, g/cm 3: 0.922
Haze, %: 4.7
Gloss, 45: 78
Impact Strength, Drop Dart, F50, g: 85
Modulus, 1% Secant, psi: MD: 25,000
TD: 28,000
Tensile Strength @ Break, psi: MD: 3,400
TD: 2,600
Elongation @ Break, %: MD: 310
TD: 550
Minimum Thickness, mils: 0.75
Previous Designation: PE 3404
Applications: Light produce, textile bags, pouches
Key Properties: Good impact strength, stiffness

QUANTUM: PETROTHENE Low Density Polyethylene for Film (Continued):

High Clarity Homopolymers(Continued):

NA 347:
Melt Index, g/10 min.: 2.0
Density, g/cm 3: 0.924
Haze, %: 5.5
Gloss, 45: 70
Impact Strength, Drop Dart, F50, g: 75
Modulus, 1% Secant, psi: MD: 33,000
TD: 36,000
Tensile Strength @ Break, psi: MD: 3,400
TD: 2,800
Elongation @ Break, %: MD: 300
TD: 500
Minimum Thickness, mils: 0.9
Previous Designation: PE 3407
Applications: Packaging films, bread pouches
Key Properties: Tear strength, stiffness

NA 348:
Melt Index, g/10 min.: 2.3
Density, g/cm 3: 0.922
Haze, %: 5.0
Gloss, 45: 70
Impact Strength, Drop Dart, F50, g: 80
Modulus, 1% Secant, psi: MD: 30,000
TD: 34,000
Tensile Strength @ Break, psi: MD: 3,300
TD: 2,600
Elongation @ Break, %: MD: 310
TD: 540
Minimum Thickness, mils: 0.7
Previous Designation: PE 3408
Applications: Packaging films, retail bags
Key Properties: Clarity, good processability

QUANTUM: PETROTHENE Low Density Polyethylene for Film (Continued):

High Clarity Homopolymers(Continued):

NA 342:
Melt Index, g/10 min.: 1.0
Density, g/cm 3: 0.925
Haze, %: 4.5
Gloss, 45: 70
Impact Strength, Drop Dart, F50, g: 65
Modulus, 1% Secant, psi: MD: 30,000
TD: 35,000
Tensile Strength @ Break, psi: MD: 3,500
TD: 2,700
Elongation @ Break, %: MD: 300
500
Minimum Thickness, mils: 1.0
Previous Designation: PE 3400
Applications: High clarity packaging
Key Properties: Clarity, high melt strength

NA 321:
Melt Index, g/10 min.: 2.0
Density, g/cm 3: 0.923
Haze, %: 4.7
Gloss, 45: 75
Impact Strength, Drop Dart, F50, g: 75
Modulus, 1% Secant, psi: MD: 29,000
TD: 36,000
Tensile Strength @ Break, psi: MD: 3,300
TD: 2,500
Elongation @ Break, %: MD: 320
TD: 560
Minimum Thickness, mils: 1.0
Previous Designation: NA 153
Applications: High clarity packaging
Key Properties: Excellent clarity

QUANTUM: PETROTHENE Low Density Polyethylene for Film (Continued):

HMW-LDPE:

NA 351:
Melt Index, g/10 min.: 0.3
Density, g/cm 3: 0.925
Haze, %: 6.0
Gloss, 45: 70
Impact Strength, Drop Dart, F50, g: 270
Modulus, 1% Secant, psi: MD: 30,000
TD: 33,000
Tensile Strength @ Break, psi: MD: 4,200
TD: 4,000
Elongation @ Break, %: MD: 220
TD: 340
Minimum Thickness, mils: 1.5
Previous Designation: PE 3503
Applications: Textile, heavy produce bags, shrink wrap
Key Properties: High strength

NA 355:
Melt Index, g/10 min.: 0.5
Density, g/cm 3: 0.925
Haze, %: 4.8
Gloss, 45: 72
Impact Strength, Drop Dart, F50, g: 200
Modulus, 1% Secant, psi: MD: 30,000
TD: 32,000
Tensile Strength @ Break, psi: MD: 4,300
TD: 4,100
Elongation @ Break, %: MD: 250
TD: 500
Minimum Thickness, mils: 1.5
Previous Designation: PE 3505
Applications: Textile, heavy produce bags, shrink wrap
Key Properties: High clarity, stiffness

QUANTUM: PETROTHENE Low Density Polyethylene for Film:

HMW-LDPE(Continued):

NA 357:
Melt Index, g/10 min.: 0.25
Density, g/cm 3: 0.928
% Vinyl Acetate Incorporated: 4.5
Haze, %: 5.5
Gloss, 45: 70
Impact Strength, Drop Dart, F50, g: 450
Modulus, 1% Secant, psi: MD: 22,000
TD: 24,000
Tensile Strength @ Break, psi: MD: 4,300
TD: 4,100
Elongation @ Break, %: MD: 330
TD: 560
Minimum Thickness, mils: 2.0
Previous Designation: PE 3507
Applications: Ice bags, quick freeze bags, shrink wrap
Key Properties: High strength, heat seal

Medium Density:

NA 272:
Melt Index, g/10 min.: 1.45
Density, g/cm 3: 0.932
Haze, %: 10.0
Gloss, 45: 50
Impact Strength, Drop Dart, F50, g: 60
Modulus, 1% Secant, psi: MD: 48,000
TD: 55,000
Tensile Strength @ Break, psi: MD: 3,600
TD: 3,200
Elongation at Break, %: MD: 400
TD: 500
Minimum Thickness, mils: 1.0
Previous Designation: NA 272
Applications: Industrial and consumer medium duty packaging
Key Properties: Excellent stiffness, processability

QUANTUM: PETROTHENE Low Density Polyethylene for Film (Continued):

Medium Density(Continued):

NA 285:
Melt Index, g/10 min.: 6.2
Density, g/cm 3: 0.929
Haze, %: 7.0
Gloss, 45: 65
Impact Strength, Drop Dart, F50, g: 60
Modulus, 1% Secant, psi: MD: 38,000
TD: 43,000
Tensile Strength @ Break, psi: MD: 4,400
TD: 4,200
Elongation @ Break, %: MD: 500
TD: 600
Minimum Thickness, mils: 0.8
Previous Designation: NA 285
Applications: Medium density packaging, household wrap
Key Properties: High stiffness, good optics

NA 274:
Melt Index, g/10 min.: 3.0
Density, g/cm 3: 0.932
Haze, %: 4.5
Gloss, 45: 75
Impact Strength Drop Dart, F50, g: 60
Modulus, 1% Secant, psi: psi: MD: 34,000
TD: 37,000
Tensile Strength @ Break, psi: MD: 3,600
TD: 2,300
Elongation @ Break, %: MD: 450
TD: 540
Minimum Thickness, mils: 1.0
Previous Designation: NA TR039
Applications: Medium density packaging
Key Properties: High stiffness, processability

QUANTUM: PETROTHENE Low Density Polyethylene for Film (Continued):

Heavy Duty Homopolymers:

NA 940:
Melt Index, g/10 min.: 0.25
Density, g/cm 3: 0.920
Haze, %: 25.0
Gloss, 45: 30
Impact Strength, Drop Dart, F50, g: 220
Modulus, 1% Secant, psi: MD: 28,000
TD: 32,000
Tensile Strength @ Break, psi: MD: 3,000
TD: 2,700
Elongation @ Break, %: MD: 300
TD: 450
Minimum Thickness, mils: 1.25
Previous Designation: PE 940
Applications: High puncture resistance, impact strength
Key Properties: Heavy duty shipping bags

NA 980:
Melt Index, g/10 min.: 0.25
Density, g/cm 3: 0.927
Haze, %: 20.0
Gloss, 45: 35
Impact Strength, Drop Dart, F50, g: 180
Modulus, 1% Secant, psi: MD: 30,000
TD: 35,000
Tensile Strength @ Break, psi: MD: 3,000
TD: 2,800
Elongation @ Break, %: MD: 310
TD: 430
Minimum Thickness, mils: 1.25
Previous Designation: PE 980
Applications: High impact strength, shrink properties
Key Properties: Pallet shrink wrap, heavy duty bags

QUANTUM: PETROTHENE Low Density Polyethylene for Film (Continued):

Heavy Duty Copolymers:

NA 985:
Melt Index, g/10 min.: 0.25
Density, g/cm 3: 0.920
% Vinyl Acetate Incorporated: 1.5
Haze, %: 13.0
Gloss, 45: 45
Impact Strength, Drop Dart, F50, g: 200
Modulus, 1% Secant, psi: MD: 20,000
TD: 19,000
Tensile Strength @ Break, psi: MD: 3,000
TD: 2,800
Elongation @ Break, %: MD: 350
TD: 500
Minimum Thickness, mils: 1.25
Previous Designation: PE983-6
Applications: High impact strength, shrink properties
Key Properties: Pallet shrink wrap, heavy duty bags

NA 480:
Melt Index, g/10 min.: 0.25
Density, g/cm 3: 0.927
% Vinyl Acetate Incorporated: 4.5
Haze, %: 10.0
Gloss, 45: 55
Impact Strength, Drop Dart, F50, g: 380
Modulus, 1% Secant, psi: MD: 16,000
TD: 17,000
Tensile Strength @ Break, psi: MD: 3,800
TD: 3,800
Elongation @ Break, %: MD: 370
TD: 520
Minimum Thickness, mils: 1.25
Previous Designation: PE 480
Applications: Ice bags, specialty applications
Key Properties: High strength, puncture resistance

QUANTUM: PETROTHENE Low Density Polyethylene for Film (Continued):

Heavy Duty Copolymers(Continued):

NA 362:
Melt Index, g/10 min.: 0.4
Density, g/cm 3: 0.928
% Vinyl Acetate Incorporated: 7.5
Haze, %: 16.0
Gloss, 45: 44
Impact Strength, Drop Dart, F50, g: 370
Modulus, 1% Secant, psi: MD: 15,000
TD: 16,000
Tensile Strength @ Break, psi: MD: 3,600
TD: 3,600
Elongation @ Break, %: MD: 360
TD: 500
Minimum Thickness, mils: 1.25
Previous Designation: PE 3350
Applications: Ice bags, bag-in-box, heavy duty skin packaging
Key Properties: High impact strength, low temperature toughness

Garment:

NA 334:
Melt Index, g/10 min.: 6.0
Density, g/cm 3: 0.918
Haze, %: 12.0
Gloss, 45: 50
Impact Strength, Drop Dart, F50, g: 65
Modulus, 1% Secant, psi: MD: 20,000
TD: 23,000
Elongation @ Break, %: MD: 350
TD: 480
Minimum Thickness, mils: 0.35
Previous Designation: PE 334
Applications: Laminating films
Key Properties: High drawdown, consistency

QUANTUM: PETROTHENE Low Density Polyethylene for Film (Continued):

Garment(Continued):

NA 336:
Melt Index, g/10 min.: 6.5
Density, g/cm 3: 0.918
Haze, %: 12.0
Gloss, 45: 50
Impact Strength, Drop Dart, F50, g: 65
Modulus, 1% Secant, psi: MD: 20,000
TD: 23,000
Tensile Strength @ Break, psi: MD: 2,300
TD: 2,000
Elongation @ Break, %: MD: 350
TD: 480
Minimum Thickness, mils: 0.35
Previous Designation: PE 336
Applications: Garment dry cleaning bags
Key Properties: High drawdown, consistency

Industrial Clarity:

NA 155:
Melt Index, g/10 min.: 2.5
Density, g/cm 3: 0.923
Haze, %: 5.5
Gloss, 45: 64
Impact Strength, Drop Dart, F50, g: 90
Modulus, 1% Secant, psi: MD: 23,000
TD: 25,000
Tensile Strength @ Break, psi: MD: 2,700
TD: 2,500
Elongation @ Break, %: MD: 350
TD: 500
Minimum Thickness, mils: 0.75
Previous Designation: PE 955
Applications: Industrial films with improved clarity
Key Properties: Good stiffness, optics

QUANTUM: PETROTHENE Low Density Polyethylene for Film (Continued):

Industrial Clarity(Continued):

NA 154:
Melt Index, g/10 min.: 2.2
Density, g/cm 3: 0.921
Haze, %: 5.5
Gloss, 45: 66
Impact Strength, Drop Dart, F50, g: 83
Modulus, 1% Secant, psi: MD: 28,000
Tensile Strength @ Break, psi: MD: 3,000
TD: 2,700
Elongation @ Break, %: MD: 320
TD: 510
Minimum Thickness, mils: 1.0
Previous Designation: NA 154
Applications: Medium duty packaging, liners
Key Properties: Good processability, clarity

NA 495:
Melt Index, g/10 min.: 1.2
Density, g/cm 3: 0.922
Haze, %: 6.0
Gloss, 45: 64
Impact Strength, Drop Dart, F50, g: 85
Modulus, 1% Secant, psi: MD: 26,000
TD: 29,000
Tensile Strength @ Break, psi: MD: 3,400
TD: 2,700
Elongation @ Break, %: MD: 300
TD: 500
Minimum Thickness, mils: 1.2
Previous Designation: PE 4954
Applications: Clarity industrial and consumer packaging
Key Properties: High clarity, stiffness

QUANTUM: PETROTHENE Low Density Polyethylene for Film (Continued):

Industrial Clarity(Continued):

NA 496:
Melt Index, g/10 min.: 1.8
Density, g/cm 3: 0.922
Haze, %: 5.5
Gloss, 45: 68
Impact Strength, Drop Dart, F50, g: 80
Modulus, 1% Secant, psi: MD: 25,000
TD: 28,000
Tensile Strength @ Break, psi: MD: 3,300
TD: 2,500
Elongation @ Break, %: MD: 300
TD: 520
Minimum Thickness, mils: 1.0
Previous Designation: PE 4955
Applications: Textile, light produce, bread, and other thin packaging
Key Properties: Very high clarity, high strength and stiffness

Liner:

NA 960:
Melt Index, g/10 min.: 0.9
Density, g/cm 3: <0.920
Haze, %: 11.0
Gloss, 45: 40
Impact Strength, Drop Dart, F50, g: 170
Modulus, 1% Secant, psi: MD: 25,000
TD: 31,000
Tensile Strength @ Break, psi: MD: 3,400
TD: 2,800
Elongation @ Break, %: MD: 210
TD: 530
Minimum Thickness, mils: 1.25
Previous Designation: NA 142
Applications: Heavy duty packaging
Key Properties: Good processability, drawdown

QUANTUM: PETROTHENE Low Density Polyethylene for Film (Continued):

Liner(Continued):

NA 951:
Melt Index, g/10 min.: 2.2
Density, g/cm 3: <0.920
Haze, %: 7.0
Gloss, 45: 56
Impact Strength, Drop Dart, F50, g: 135
Modulus, 1% Secant, psi: MD: 27,000
32,000
Tensile Strength @ Break, psi: MD: 3,900
TD: 2,600
Elongation @ Break, %: MD: 360
TD: 540
Minimum Thickness, mils: 1.0
Previous Designation: NA 344
Applications: Industrial & consumer packaging, liners
Key Properties: Good processability, drawdown

NA 952:
Melt Index, g/10 min.: 2.0
Density, g/cm 3: 0.918
Haze, %: 15.0
Gloss, 45: 35
Impact Strength, Drop Dart, F50, g: 130
Modulus, 1% Secant, psi: MD: 19,000
TD: 22,000
Tensile Strength @ Break, psi: MD: 2,500
TD: 2,200
Elongation @ Break, %: MD: 300
TD: 500
Minimum Thickness, mils: 1.0
Previous Designation: PE 952
Applications: Industrial liners, refuse bags, diaper liners
Key Properties: Good toughness, impact strength, drawdown

QUANTUM: PETROTHENE Low Density Polyethylene for Film (Continued):

Liner(Continued):

NA 957:
Melt Index, g/10 min.: 2.6
Density, g/cm 3: 0.918
Haze, %: 15.0
Gloss, 45: 40
Impact Strength, Drop Dart, F50, g: 155
Modulus, 1% Secant, psi: MD: 21,000
TD: 25,000
Tensile Strength @ Break, psi: MD: 2,500
TD: 2,200
Elongation @ Break, %: MD: 300
500
Minimum Thickness, mils: 0.8
Previous Designation: PE 957
Applications: Multi-wall paper bag liner
Key Properties: Good heat seal, drawdown

QUANTUM: PETROTHENE Linear Low Density Polyethylene for Injection Molding:

GA 564:
Density: g/cm 3: 0.924
Melt Index, (190/2.16): g/10 min.: 20
Tensile Strength @ Yield: psi: 2,000
Elongation @ Break: %: 300
Flexural Modulus, 1% Secant: psi: 45,000
Low Temp. Brittleness, F50: F: -26
C: -32
Hardness, Shore D: 52
Applications: Industrial containers, trash cans, large parts
Key Properties: High rigidity, good impact strength at low temperatures, outstanding ESCR

GA 574:
Density: g/cm 3: 0.926
Melt Index, (190/2.16): g/10 min.: 50
Tensile Strength @ Yield: psi: 2,100
Elongation @ Break: %: 170
Flexural Modulus, 1% Secant: psi: 52,000
Low Temp. Brittleness, F50: F: -15
C: -26
Hardness, Shore D: 52
Applications: Lids, caps, closures, containers
Key Properties: High rigidity, good surface appearance, fast cycle time

GA 584:
Density: g/cm 3: 0.929
Melt Index, (190/2.16): g/10 min.: 100
Tensile Strength @ Yield: psi: 2,300
Elongation @ Break: %: 40
Flexural Modulus, 1% Secant: psi: 76,000
Low Temp. Brittleness, F50: F: 5
C: -15
Hardness, Shore D: hrs.: 57
Applications: Multi-cavity tooling, thin-walled parts
Key Properties: Excellent flow, warp resistance, surface appearance, fast cycle times

QUANTUM: PETROTHENE Linear Low Density Polyethylene for Injection Molding(Continued):

GB 564:
Density: g/cm 3: 0.924
Melt Index, (190/2.16): g/10 min.: 20
Tensile Strength @ Yield: psi: 1,950
Elongation @ Break: %: 280
Flexural Modulus, 1% Secant: psi: 47,000
Low Temp. Brittleness, F50: F: -26
C: -32
Hardness, Shore D: hrs.: 52
Applications: Industrial containers, trash cans, large parts
Key Properties: High rigidity, good impact strength at low temperatures, outstanding ESCR

GB 574:
Density, g/cm 3: 0.926
Melt Index, (190/2.16): g/10 min.: 50
Tensile Strength @ Yield: psi: 2,000
Elongation @ Break: %: 200
Flexural Modulus, 1% Secant: psi: 55,000
Low Temp. Brittleness, F50: F: -15
C: -26
Hardness, Shore D: hrs.: 52
Applications: Lids, caps, closures, containers
Key Properties: High rigidity, good surface appearance, fast cycle time

QUANTUM: PETROTHENE Low Density Polyethylene for Injection and Blow Molding:

Injection Molding:

NA 117-00:
Density, g/cm 3: 0.915
Melt Index, g/10 min: 8.5
Tensile Strength: 1,700
Elongation @ Break, %: 525
Flexural Stiffness, psi: 18,200
Torsional Stiffness, psi: 21,000
1% Secant Modulus, psi: 20,600
Vicat Softening Point, C: 88
Low Temperature Brittleness, C/F50: -76
Previous Designation: NA 117
Applications: Toys, housewares
Key Properties: Good toughness, gloss

NA 241-000:
Density g/cm 3: 0.928
Melt Index, g/10 min: 22.0
Tensile Strength: 1.960
Elongation @ Break, %: 95
Flexural Stiffness, psi: 46,900
Torsional Stiffness, psi: 46,000
1% Secant Modulus, psi: 45,800
Vicat Softening Point, C: 102
Low Temperature Brittleness, C/F50: -52
Previous Designation: NA 241
Applications: Valve fittings and small, stiff parts
Key Properties: Good appearance, high stiffness, high flow

NA 249-000:
Density, g/cm 3: 0.925
Melt Index, g/10 min: 57.0
Tensile Strength: 1,850
Elongation @ Break, %: 90
Flexural Stiffness, psi: 32,000
Torsional Stiffness, psi: 33,000
1% Secant Modulus, psi: 35,000
Vicat Softening Point, C: 95
Low Temperature Brittleness, C/F50: -26
Previous Designation: NA 249
Applications: Lids, general purpose containers
Key Properties: High flow, high ESCR

QUANTUM: PETROTHENE Low Density Polyethylene For Injection and Blow Molding (Continued):

Injection Molding(Continued):

NA 254-000:
Density, g/cm 3: 0.929
Melt Index, g/10 min: 5.0
Tensile Strength: 1,900
Elongation @ Break %: 400
Flexural Stiffness, psi: 48,800
Torsional Stiffness, psi: 45,000
1% Secant Modulus, psi: 50,000
Vicat Softening Point, C: 105
Low Temperature Brittleness, C/F50: <-76
Previous Designation: NA 254
Applications: Small items, personal product containers
Key Properties: Good appearance, medium density

NA 270-000:
Density, g/cm 3: 0.912
Melt Index, g/10 min: 70.0
Tensile Strength: 1,270
Elongation @ Break, %: 325
Flexural Stiffness, psi: 16,600
Torsional Stiffness, psi: 15,800
1% Secant Modulus, psi: 16,600
Vicat Softening Point, C: 78
Low Temperature Brittleness, C/F50 -34
Previous Designation: NA 270
Applications: Intricate flexible items
Key Properties: Good appearance, flow, flexibility

NA 306-00:
Density, g/cm 3: 0.920 max.
Melt Index, g/10 min: 2.2
Tensile Strength: 1,470
Elongation @ Break, %: 590
Flexural Modulus, psi: 34,100
Vicat Softening Point, C: 88
Low Temperature Brittleness, C/F50: <-76
Heat Deflection Temperature @ 66 psi, C: 38
Hardness, Shore D: 49
Previous Designation: PE 306
Applications: Industrial and consumer packaging and liners
Key Properties: Good processability and drawdown

QUANTUM: PETROTHENE Low Density Polyethylene for Injection and Blow Molding(Continued):

Injection Molding (Continued):

NA 309-00:
Density, g/cm 3: 0.920
Melt Index, g/10 min: 0.9
Tensile Strength: 2,100
Elongation @ Break, %: 660
Flexural Stiffness, psi: 21,700
Torsional Stiffness, psi: 28,800
1% Secant Modulus, psi: 26,900
Vicat Softening Point, C: 94
Low Temperature Brittleness, C/F50: -76
Previous Designation: NA 309
Applications: Small items
Key Properties: Good toughness

NA 820-000:
Density, g/cm 3: 0.918
Melt Index, g/10 min: 2.2
Tensile Strength: 1,400
Elongation @ Break, %: 400
Flexural Modulus, psi: 37,000
Vicat Softening Point, C: 85
Low Temperature Brittleness, C/F50: -70
Heat Deflection Temperature @ 66 psi, C: 40
Hardness, Shore D: 48
Previous Designation: PE 820
Applications: Containers, closures, industrial parts
Key Properties: Low temperature, toughness, high ESCR

NA 831-000:
Density, g/cm 3: 0.918
Melt Index, g/10 min: 9.0
Tensile Strength: 1,300
Elongation @ Break, %: 200
Flexural Modulus, psi: 37,000
Vicat Softening Point, C: 85
Low Temperature Brittleness, C/F50: -65
Heat Deflection Temperature @ 66 psi, C: 40
Hardness, Shore D: 48
Previous Designation: PE 831
Applications: Housewares, containers, industrial parts
Key Properties: Low temperature, toughness, high ESCR

QUANTUM: PETROTHENE Low Density Polyethylene for Injection and Blow Molding (Continued):

Injection Molding (Continued):

NA 836-154:
Density, g/cm 3: 0.918
Melt Index, g/10 min: 6.0
Tensile Strength: 1,400
Elongation @ Break, %: 300
Flexural Modulus, psi: 37,000
Vicat Softening Point, C: 85
Low Temperature Brittleness, C/F50: -60
Heat Deflection Temperature @ 66 psi, C: 40
Hardness, Shore D: 48
Previous Designation: PE 836
Applications: Housewares, containers, industrial parts
Key Properties: High ESCR, low temperature toughness

NA 853-000:
Density, g/cm 3: 0.923
Melt Index, g/10 min: 2.0
Tensile Strength: 1,800
Elongation @ Break, %: 180
Flexural Modulus, psi: 44,000
Vicat Softening Point, C: 94
Low Temperature Brittleness, C/F50: -70
Heat Deflection Tempertaure @ 66 psi, C: 44
Hardness, Shore D: 53
Previous Designation: PE 853
Applications: Caps, closures
Key Properties: High gloss, good ESCR, fast cycles

NA 860-000:
Density, g/cm 3: 0.923
Melt Index, g/10 min: 24.0
Tensile Strength: 1,600
Elongation @ Break, %: 150
Flexural Modulus, psi: 44,000
Vicat Softening Point, C: 92
Low Temperature Brittleness, C/F50: -35
Heat Deflection Temperature @ 66 psi, C: 44
Hardness, Shore D: 53
Previous Designation: PE 860
Applications: Housewares, toys, containers, novelty items
Key Properties: High stiffness, fast cycles, high flow

QUANTUM: PETROTHENE Low Density Polyethylene for Injection and Blow Molding (Continued):

Blow Molding:

NA 171-000:
Density, g/cm 3: 0.930
Melt Index, g/10 min: 1.35
Tensile Strength: 2,100
Elongation @ Break, %: 550
Flexural Stiffness, psi: 52,800
Torsional Stiffness, psi: 42,600
1% Secant Modulus, psi: 50,500
Vicat Softening Point, C: 107
Low Temperature Brittleness, C/F50: -76
Previous Designation: NA 171
Applications: Small items
Key Properties: Good appearance, fair toughness

NA 301-000:
Density, g/cm 3: 0.918
Melt Index, g/10 min: 1.2
Tensile Strength: 2,100
Elongation @ Break, %: 590
Flexural Stiffness, psi: 20,500
Torsional Stiffness, psi: 22,700
1% Secant Modulus, psi: 22,400
Vicat Softening Point, C: 94
Low Temperature Brittleness, C/F50: -76
Previous Designation: NA 301
Applications: Small items
Key Properties: Good appearance, good toughness

NA 345-000:
Density, g/cm 3: 0.922
Melt Index, g/10 min: 1.8
Tensile Strength: 1,900
Elongation @ Break, %: 250
Flexural Modulus, psi: 43,000
Vicat Softening Point, C: 93
Low Temperature Brittleness, C/F50: -70
Heat Deflection Temperature @ 66 psi: 43
Hardness, Shore D: 52
Previous Designation: PE 3414
Applications: Containers, squeeze bottles
Key Properties: High ESCR, low temperature toughness

QUANTUM: PETROTHENE Low Density Polyethylene for Injection and Blow Molding (Continued):

Blow Molding (Continued):

NA 810-000:
Density, g/cm 3: 0.918
Melt Index, g/10 min: 1.3
Tensile Strength: 1,400
Elongation @ Break, %: 500
1% Secant Modulus, psi: 14,000 (5% Secant)
Low Temperature Brittleness, C/F50: -70
Heat Deflection Temperature @ 66 psi, C: 49
Hardness, Shore D: 44
Previous Designation: PE 810
Applications: Blow molding small, flexible containers
Key Properties: Superior flow, excellent processability, gloss, appearance and ESCR

NA 850-000:
Density, g/cm 3: 0.918
Melt Index, g/10 min: 2.0
Tensile Strength: 1,390
Elongation @ Break, %: 630
Flexural Modulus, psi: 32,900
Vicat Softening Point, C: 88
Low Temperature Brittleness, C/F50: <-76
Heat Deflection Temperature @ 66 psi, C: 38
Hardness, Shore D: 49
Previous Designation: PE 850
Applications: Small items, squeeze bottles
Key Properties: Good flexibility, appearance

QUANTUM: PETROTHENE Linear Low and Medium Density Polyethylene for Rotational Molding:

PA 436:
Density: g/cm 3: 0.935
Melt Index, (190/2.16): g/10 min.: 5.5
Comonomer: Butene
Tensile Strength @ Yield: psi: 2,250
Flexural Modulus, 1% Secant: psi: 86,000
Heat Distortion Temp. @ 66 psi: C: 54
@ 264 psi: C: 40
ESCR, F50 100% Igepal: hrs.: >1,000
10% Igepal: hrs.: 24
Low Temp. Impact 1/8" Specimen: ft.-lbs.: 44
1/4" Specimen: ft.-lbs.: 200
Applications: Agricultural and chemical storage containers
Key Properties: Excellent ESCR, low temperature impact strength, warp resistance

PA 444:
Density: g/cm 3: 0.939
Melt Index, (190/2.16): g/10 min.: 4.0
Comonomer: Butene
Tensile Strength @ Yield: psi: 2,600
Flexural Modulus, 1% Secant: 110,000
Heat Distortion Temp. @ 66 psi: C: 54
@ 264 psi: C: 40
ESCR, F50 100% Igepal: hrs.: 650
10% Igepal: hrs.: 20
Low Temp. Impact 1/8" Specimen: ft.-lbs.: 44
1/4" Specimen: ft.-lbs.: 178
Applications: Containers, toys, hoppers, equipment housing containers
Key Properties: Excellent impact strength, ESCR, warp resistance and stiffness

GA 625:
Density: g/cm 3: 0.935
Melt Index, (190/2.16): g/10 min.: 5.0
Comonomer: Hexene
Tensile Strength @ Yield: psi: 2,500
Flexural Modulus, 1% Secant: psi: 87,200
Heat Distortion Temp. @ 66 psi: C: 52
@ 264 psi: C: 39
ESCR, F50 100% Igepal: hrs.: >1,000
10% Igepal: hrs.: 350
Low Temp. Impact 1/8" specimen: ft.-lbs.: 45
1/4" specimen: ft.-lbs.: 200
Applications: Agricultural and chemical storage containers
Key Properties: Excellent flow, ESCR, low temperature impact strength

QUANTUM: PETROTHENE Linear Low and Medium Density Polyethylene for Rotational Molding (Continued):

GA 635:
Density: g/cm 3: 0.935
Melt Index, (190/2.16): g/10 min.: 6.5
Comonomer: Hexene
Tensile Strength @ Yield: psi: 2,700
Flexural Modulus, 1% Secant: psi: 80,700
Heat Distortion Temp. @ 66 psi: C: 50
@ 264 psi: C: 35
ESCR, F50 100% Igepal: hrs.: >1,000
10% Igepal: hrs.: 92
Low Temp. Impact 1/8" Specimen: ft.-lbs.: 45
1/4" Specimen: ft.-lbs.: 200
Applications: Agricultural, chemical and waste storage containers
Key Properties: Excellent flow, low temperature impact strength

GA 643:
Density: g/cm 3: 0.940
Melt Index, (190/2.16): g/10 min.: 3.5
Comonomer: Hexene
Tensile Strength @ Yield: psi: 2,600
Flexural Modulus, 1% Secant: psi: 117,000
Heat Distortion Temp. @ 66 psi: C: 52
@ 264 psi: C: 40
ESCR, F50 100% Igepal: hrs.: >1,000
10% Igepal: hrs.: 480
Low Temp. Impact 1/8" Specimen: ft.-lbs.: 51
1/4" Specimem: ft.-lbs.: 198
Applications: Agricultural, chemical and waste storage containers
Key Properties: Excellent ESCR and low temperature impact strength

QUANTUM: PETROTHENE High Density Polyethylene for Blow Molding:

Copolymer Resins:

LP 5002-00:
ASTM Type, Class, Category: III A 5
Melt Index, g/10 min: 0.21
Density, g/cm 3: 0.946
Tensile Strength @ Break, psi: 3,600
Elongation @ Break, %: >600
Flexural Modulus, psi: 155,000
Tensile Impact, ft-lb/in. 2: 140
Low Temperature Brittleness, F50, C: <-76
Heat Deflection Temperature @ 66 psi, C: 70
Vicat Softening Point, C: 121
Hardness, Shore D: 64
Environmental Stress Crack Resistance, F50, hr.: >1000
FDA Status: 21CFR 177.1520
Key Properties: Excellent ESCR
Applications: Bottles for aggressive agricultural and household chemicals
Formerly Known As: HD 5002

LR 7810-00:
ASTM Type, Class, Category: III A 5
Melt Index, g/10 min.: 0.20
Density, g/cm 3: 0.948
Tensile Strength @ Break, psi: 3,560
Elongation @ Break, %: 710
Flexural Modulus, psi: 140,000
Low Temperature Brittleness, F50, C: <-76
Heat Deflection Temperature @ 66 psi, C: 69
Vicat Softening Point, C: 120
Hardness, Shore D: 66
FDA Status: 21CFR 177.1520
Key Properties: Excellent ESCR
Applications: Heavy duty detergent and chemical bottles
Formerly Known As: LR 781

QUANTUM: PETROTHENE High Density Polyethylene for Blow Molding (Continued):

Copolymer Resins(Continued):

LB 5003-00:
ASTM Type, Class, Category: III A 5
Melt Index, g/10 min.: 0.31
Density, g/cm 3: 0.949
Tensile Strength @ Break, psi: 3,780
Elongation @ Break, %: >600
Flexural Modulus, psi: 170,000
Tensile Impact, ft-lb/in. 2: 120
Low Temperature Brittleness, F50, C: <-76
Heat Deflection Temperature @ 66 psi, C: 72
Vicat Softening Point, C: 122
Hardness, Shore D: 65
Environmental Stress Crack Resistance, F50, hr.: >500
FDA Status: 21CFR 177.1520
Key Properties: Excellent ESCR
Applications: Heavy duty detergent and chemical bottles
Formerly Known As: HD 5003

LB 5602-00:
ASTM Type, Class, Category: III A 5
Melt Index, g/10 min.: 0.30
Density, g/cm 3: 0.952
Tensile Strength @ Break, psi: 3,960
Elongation @ Break, %: >600
Flexural Modulus, psi: 185,000
Tensile Impact, ft-lb/in. 2: 120
Low Temperature Brittleness, F50, C: <-76
Heat Deflection Temperature @ 66 psi, C: 75
Vicat Softening Point, C: 123
Hardness, Shore D: 66
Environmental Stress Crack Resistance, F50, hr.: >500
FDA Status: 21CFR 177.1520
Key Properties: Good stiffness and ESCR
Applications: Household chemical bottles
Formerly Known As: HD 5602

QUANTUM: PETROTHENE High Density Polyethylene for Blow Molding (Continued):

Copolymer Resins(Continued):

LB 5604-00:
ASTM Type, Class, Category: III A 5
Melt Index, g/10 min.: 0.35
Density, g/cm 3: 0.951
Tensile Strength @ Break, psi: 3,900
Elongation @ Break, %: >600
Flexural Modulus, psi: 180,000
Tensile Impact, ft-lb/in 2: 115
Low Temperature Brittleness, F50, C: <-76
Heat Deflection Temperature @ 66 psi, C: 74
Vicat Softening Point, C: 123
Hardness, Shore D: 66
Environmental Stress Crack Resistance, F50, hr.: >500
FDA Status: 21CFR 177.1520
Key Properties: Good stiffness and ESCR
Applications: Household chemical and personal care bottles
Formerly Known As: HD 5604

LR 7320-00:
ASTM Type, Class, Category: III A 5
Melt Index, g/10 min.: 0.30
Density, g/cm 3: 0.953
Tensile Strength @ Break, psi: 3,900
Elongation @ Break, %: 900
1% Secant Modulus, psi: 118,000
Low Temperature Brittleness, F50, C: <-76
Vicat Softening Point, C: 128
FDA Status: 21CFR 177.1520
Key Properties: Good stiffness/ESCR balance
Applications: Bleach, detergent, and household chemical bottles
Formerly Known As: LR 732

LR 7340-00:
ASTM Type, Class, Category: III A 4-5
Melt Index, g/10 min.: 0.38
Density, g/cm 3: 0.954
Tensile Strength @ Break, psi: 3,850
Elongation @ Break, %: 850
1% Secant Modulus, psi: 115,000
Low Temperature Brittleness, F50, C: <-76
Vicat Softening Point, C: 127
FDA Status: 21CFR 177.1520
Key Properties: Good stiffness/ESCR balance
Applications: Bleach, household chemical, oil and personal care bottles
Formerly Known As: LR 734

QUANTUM: PETROTHENE High Density Polyethylene for Blow Molding (Continued):

Copolymer Resins (Continued):

LS 9010-46:
ASTM Type, Class, Category: III A 3
Melt Index, g/10 min: 1.4
Density, g/cm 3: 0.952
Tensile Strength @ Break, psi: 4,100
Elongation @ Break, %: 1,000
1% Secant Modulus, psi: 112,000
Low Temperature Brittleness, F50, C: <-76
Vicat Softening Point, C: 127
FDA Status: 21 CFR 177.1520
Key Properties: High gloss with release for injection-blow molding
Applications: Personal care bottles
Formerly Known As: LS 901

Homopolymer Resins:

LB 6004-00:
ASTM Type, Class, Category: IV A 5
Melt Index, g/10 min.: 0.32
Density, g/cm 3: 0.960+
Tensile Strength @ Break, psi: 4,400
Flexural Modulus, psi: 220,000
Tensile Impact, ft-lbs/in. 2: 100
Low Temperature Brittleness, F50, C: <-76
Heat Deflection Temperature @ 66 psi, C: 78
Vicat Softening Point, C: 125
Hardness, Shore D: 68
FDA Status: 21CFR 177.1520
Key Properties: Excellent rigidity and good processability
Applications: Water, milk and juice bottles
Formerly Known As: HD 6004

LM 6007-00:
ASTM Type, Class, Category: IV A 4
Melt Index, g/10 min.: 0.70
Density, g/cm 3: 0.960+
Tensile Strength @ Break, psi: 4,400
Elongation @ Break %: >600
Flexural Modulus, psi: 220,000
Tensile Impact, ft-lbs/in. 2: 100
Low Temperature Brittleness, F50, C: <-76
Heat Deflection Temperature @ 66 psi, C: 78
Vicat Softening Point, C: 125
Hardness, Shore D: 68
FDA Status: 21CFR 177.1520
Key Properties: Good rigidity and processability
Applications: Water, milk and juice bottles
Formerly Known As: HD 6007

QUANTUM: PETROTHENE High Density Polyethylene for Blow Molding (Continued):

Homopolymer Resins(Continued):

LB 7480-00:
ASTM Type, Class, Category: IV A 4
Melt Index, g/10 min.: 0.65
Density, g/cm 3: 0.959+
Tensile Strength @ Break, psi: 4,500
Elongation @ Break, %: 910
1% Secant Modulus, psi: 141,500
Low Temperature Brittleness, F50, C: <-76
Vicat Softening Point, C: 130
FDA Status: 21CFR 177.1520
Key Properties: Excellent flow rate, high stiffness
Applications: Thin-walled milk and water bottles
Formerly Known As: LB 748

LT 6009-00:
ASTM Type, Class, Category: IV A 4
Melt Index, g/10 min.: 0.85
Density, g/cm 3: 0.960+
Tensile Strength @ Break, psi: 4,400
Elongation @ Break, psi: >600
Flexural Modulus, psi: 220,000
Tensile Impact, ft-lb/in 2: 80
Low Temperature Brittleness, F50, C: <-76
Heat Deflection Temperature @ 66 psi, C: 78
Vicat Softening Point, C: 125
Hardness, Shore D: 68
FDA Status: 21CFR 177.1520
Key Properties: Good processability and rigidity
Applications: Water, milk and juice bottles
Formerly Known As: HD 6009

LM 6085-00:
ASTM Type, Class, Category: III A 4
Melt Index, g/10 min.: 0.80
Density, g/cm 3: 0.960+
Tensile Strength @ Break, psi: 4,350
Elongation @ Break, %: >600
Flexural Modulus, psi: 200,000
Tensile Impact, ft-lb/in 2: 90
Low Temperature Brittleness, F50, C: <-76
Heat Deflection Temperature @ 66 psi, C: 78
Vicat Softening Point, C: 125
Hardness Shore D: 67
FDA Status: 21CFR 177.1520
Key Properties: High stiffness and good processability
Applications: Motor oil bottles
Formerly Known As: HD 6085

QUANTUM: PETROTHENE High Density Polyethylene for Blow Molding (Continued):

High Load Melt Index Resins:

LR 7230-00:
ASTM Type, Class, Category: III A 2-3
Melt Index, g/10 min.: 9.5 HLMI
Density, g/cm 3: 0.950
Tensile Strength @ Break, psi: 3,970
Elongation @ Break, %: 810
1% Secant Modulus, psi: 111,000
Low Temperature Brittleness, F50, C: <-76
Vicat Softening Point, C: 128
FDA Status: 21CFR 177.1520
Key Properties: Very good ESCR, impact resistance
Applications: Drums and large containers
Formerly Known As: LR 723

LB 5703-00:
ASTM Type, Class, Category: III A 2-3
Melt Index, g/10 min.: 11.5 HLMI
Density, g/cm 3: 0.951
Tensile Strength @ Break, psi: 3,840
Elongation @ Break, %: >600
Flexural Modulus, psi: 175,000
Tensile Impact, ft-lb/in. 2: 180
Low Temperature Brittleness, F50, C: <-76
Heat Deflection Temperature @ 66 psi, C: 73
Vicat Softening Point, C: 122
Hardness, Shore D: 65
Environmental Stress Crack Resistance, F50, hr.: 200
FDA Status: 21CFR 177.1520
Key Properties: Excellent low temp. impact resistance, ESCR; Meets DOT Spec. 34
Applications: Industrial applications
Formerly Known As: HD 5703

LT 5704-00:
ASTM Type, Class, Category: III A 2
Melt Index, g/10 min.: 22 HLMI
Density, g/cm 3: 0.949
Tensile Strength @ Break, psi: 3,900
Elongation @ Break, %: >600
Flexural Modulus, psi: 180,000
Tensile Impact, ft-lb/in. 2: 115
Low Temperature Brittleness, F50, C: <-76
Heat Deflection Temperature @ 66 psi, C: 74
Vicat Softening Point, C: 123
Hardness, Shore D: 66
Environmental Stress Crack Resistance, F50, hr.: 200
FDA Status: 21CFR 177.1520
Key Properties: Good rigidity and ESCR
Applications: Heavy duty chemical bottles
Formerly Known As: HD 5704

QUANTUM: PETROTHENE High Density Polyethylene for Blow Molding (Continued):

LT 5705-00:
ASTM Type, Class, Category: III A 2
Melt Index, g/10 min.: 20 HLMI
Density, g/cm 3: 0.945
Tensile Strength @ Break, psi: 3,600
Elongation @ Break, %: >600
Flexural Modulus, psi: 155,000
Tensile Impact, ft-lbs/in. 2: 140
Low Temperature Brittleness, F50, C: <-76
Heat Deflection Temperature @ 66 psi, C: 70
Vicat Softening Point, C: 121
Hardness, Shore D: 64
Environmental Stress Crack Resistance, F50, hr.: 1000
FDA Status: 21CFR 177.1520
Key Properties: High ESCR and melt strength
Applications: Large industrial parts
Formerly Known As: HD 5705

LP 5711-00:
ASTM Type, Class, Category: III A 2-3
Melt Index, g/10 min.: 11 HLMI
Density, g/cm 3: 0.954
Tensile Strength @ Break, psi: 4,080
Elongation @ Break, %: >600
Flexural Modulus, psi: 190,000
Tensile Impact, ft-lb/in. 2: 225
Low Temperature Brittleness, F50, C: <-76
Heat Deflection Temperature @ 66 psi, C: 74
Vicat Softening Point, C: 124
Hardness, Shore D: 66
Environmental Stress Crack Resistance, F50, hr.: 200
FDA Status: 21CFR 177.1520
Key Properties: High molecular weight, outstanding low temp. impact resistance
Applications: Industrial applications and 55-gal. drums
Formerly Known As: HD 5711

LF 5712-00:
ASTM Type, Class, Category: III A 2
Melt Index, g/10 min.: 12 HLMI
Density, g/cm 3: 0.946
Tensile Strength @ Break, psi: 3,600
Elongation @ Break, %: >600
Flexural Modulus, psi: 155,000
Tensile Impact, ft-lbs/in. 2: 155
Low Temperature Brittleness, F50, C: <-76
Heat Deflection Temperature @ 66 psi, C: 70
Vicat Softening Point, C: 121
Hardness, Shore D: 64
Environmental Stress Crack Resistance, F50, hr.: >1000
FDA Status: 21CFR 177.1520
Key Properties: Excellent ESCR, low temp. impact resistance
Applications: Industrial applications
Formerly Known As: HD 5712

QUANTUM: PETROTHENE High Density Polyethylene for Blow Molding (Continued):

LP 5713-00:
ASTM Type, Class, Category: III A 2
Melt Index, g/10 min.: 13 HLMI
Density, g/cm 3: 0.950
Tensile Strength @ Break, psi: 3,840
Elongation @ Break, psi: >600
Flexural Modulus, psi: 175,000
Tensile Impact, ft-lb/in. 2: 225
Low Temperature Brittleness, F50, C: <-76
Heat Deflection Temperature @ 66 psi, C: 73
Vicat Softening Point, C: 122
Hardness, Shore D: 65
Environmental Stress Crack Resistance, F50, hr.: 21CFR 177.1520
Key Properties: High molecular weight, excellent ESCR
Applications: Industrial applications
Formerly Known As: HD 5713

QUANTUM: PETROTHENE High Density Polyethylene for Blown and Cast Film:

LR 9230-00:
Melt Index, g/10 min.: 0.45
Density, g/cm 3: 0.946
Tensile Strength, psi (75 mil plaque): 4,450
Elongation, @ Break, %: 650
Vicat Softening Point, C: 126
FDA Status: 21CFR177.1520
Key Properties: Good balance of stiffness, barrier and toughness
Applications: Merchandise bags, snack food packs and liners
Formerly Known As: LR 923

LY 5200-00:
Melt Index, g/10 min.: 0.14
Density, g/cm 3: 0.949
Dart Drop Impact Strength, F50, g: 100
Vicat Softening Point, C: 124
FDA Status: 21CFR177.1520
Key Properties: High impact strength, good tear and puncture resistance
Applications: Deli, produce bags
Formerly Known As: LY 520

LY 6000-00:
Melt Index, g/10 min.: 8.0 HLMI
Density, g/cm 3: 0.951
Dart Drop Impact Strength, F50, g: 235
Tensile Strength, psi (75 mil plaque): 5,000
Elongation @ Break, %: 950
Vicat Softening Point, C: 126
FDA Status: 21CFR177.1520
Key Properties: High impact strength, good tear and puncture resistance
Applications: Deli, produce bags and liners
Formerly Known As: LY 600

LY 6600-00:
Melt Index, g/10 min.: 6.2
Density, g/cm 3: 0.950
Tensile Strength, psi (75 mil plaque): 3,300
Elongation, @ Break, %: 1,100
Vicat Softening Point, C: 122
FDA Status: 21CFR177.1520
Key Properties: Very low gel levels, good processability
Applications: Pad and diaper liners
Formerly Known As: LY 660

QUANTUM: PETROTHENE High Density Polyethylene for Blown and Cast Film(Continued):

LY 9550-00:
Melt Index, g/10 min.: 8.8
Density, g/cm 3: 0.953
Tensile Strength, psi (75 mil plaque): 3,100
Elongation @ Break, %: 60
Vicat Softening Point, C: 123
FDA Status: 21CFR177.1520
Key Properties: Very low gel levels, good processability
Applications: Water quench film and typewriter ribbon
Formerly Known As: LY 955

LP 5102-00:
Resin:
Melt Index, g/10 min.: 0.2
Density, g/cm 3: 0.947
Film:
Drop Dart Impact Strength, F50, g: 120
Elmendorf Tear, g:
MD: 35
TD: 250
1% Secant Modulus, psi, MD: 110,000
TD: 120,000
FDA Status: 21CFR177.1520
Key Properties: High stiffness and strength, excellent appearance and bubble stability, good draw down
Applications: Merchandise bags
Formerly Known As: HD 5102

LT 6180-00:
Resin:
Melt Index, g/10 min.: 1.15
Density, g/cm 3: 0.96+
Film:
Elmendorf Tear, g:
MD: 25
TD: 300
Tensile Strength @ Break, psi, MD: 4,000
TD: 5,600
Elongation, %: 460
1% Secant Modulus, psi, MD: 140,000
TD: 170,000
Transmission Rates Water Vapor,
g/24 hrs./m 2: 3.9
Oxygen, cm 3/24 hrs./m 2: 2,100
FDA Status: 21CFR177.1520
Key Properties: Excellent barrier, low odor and taste, outstanding processability
Applications: Deli wrap, coextruded liners and boil-in bags
Formerly Known As: HD 6180

QUANTUM: PETROTHENE High Density Polyethylene for Blown and Cast Film(Continued):

LM 6186-00:
Resin:
Melt Index, g/10 min.: 0.80
Density, g/cm 3: 0.96+
Film:
Elmendorf Tear, g:
MD: 25
TD: 300
Tensile Strength @ Break, psi, MD: 4,000
TD: 5,600
Elongation, %: 460
1% Secant Modulus, psi, MD: 140,000
TD: 170,000
Transmission Rates Water Vapor, g/24 hrs./m 2: 5.5
Oxygen, cm 3/24 hrs./m 2: 4,200
FDA Status: 21CFR177.1520
Key Properties: Excellent barrier, low odor and taste, outstanding processability
Applications: Deli wrap, coextruded liners and boil-in bags
Formerly Known As: HD 6186

LM 6187-00:
Resin:
Melt Index, g/10 min.: 1.15
Density, g/cm 3: 0.96+
Film:
Elmendorf Tear, g:
MD: 25
TD: 300
Tensile Strength @ Break, psi, MD: 4,400
TD: 5,600
Elongation, %: 460
1% Secant Modulus, psi, MD: 140,000
TD: 170,000
Transmission Rates Water Vapor, g/24 hrs./ m 2: 4.7
Oxygen, cm 3/24 hrs./ m 2: 4,200
FDA Status: 21CFR177.1520
Key Properties: Excellent barrier, low odor and taste, outstanding processability
Applications: Deli wrap and coextruded bags
Formerly Known As: HD 6187

QUANTUM: PETROTHENE High Density Polyethylene for Injection Molding:

LS 4040-00:
ASTM Type, Class, Category: III A 3
Melt Index, g/10 min.: 4.0
Density, g/cm 3: 0.946
Tensile Strength @ Break, psi: 4,100
Elongation @ Break, %: 1,060
1% Secant Modulus, psi: 104,000
Low Temperature Brittleness, F50 @ C: <-76
Vicat Softening Point, C: 125
FDA Status: 21CFR 177.1520
Key Properties: Excellent ESCR, impact and warp resistance
Applications: Buckets and tanks
Formerly Known As: LS 404

LS 4050-00:
ASTM Type, Class, Category: III A 3
Melt Index, g/10 min.: 5.5
Density, g/cm 3: 0.946
Tensile Strength @ Break, psi: 4,100
Elongation @ Break, %: 1,060
1% Secant Modulus, psi: 104,000
Low Temperature Brittleness, F50 @ C: <-76
Vicat Softening Point, C: 125
FDA Status: 21CFR 177.1520
Key Properties: Excellent impact resistance
Applications: Buckets, tanks and crates
Formerly Known As: LS 405

LS 5060-00:
ASTM Type, Class, Category: III A 3
Melt Index, g/10 min.: 8.0
Density, g/cm 3: 0.948
Tensile Strength @ Break, psi: 3,800
1% Secant Modulus, psi: 109,000
Low Temperature Brittleness, F50 @ C: <-76
Vicat Softening Point, C: 123
FDA Status: 21CFR 177.1520
Key Properties: Excellent stiffness, impact and warp resistance
Applications: Pails, containers and lids
Formerly Known As: LS 506

QUANTUM: PETROTHENE High Density Polyethylene for Injection Molding (Continued):

LS-5090-00:
ASTM Type, Class, Category: III A 2
Melt Index, g/10 min.: 12.5
Density, g/cm 3: 0.950
Tensile Strength @ Break, psi: 3,800
Elongation @ Break, %: 830
1% Secant Modulus, psi: 116,000
Low Temperature Brittleness, F50 @ C: <-76
Vicat Softening Point, C: 123
FDA Status: 21 CFR 177.1520
Key Properties: Excellent stiffness, impact and warp resistance
Applications: Thin-walled parts and pails
Formerly Known As: LS 509

LS 5110-00:
ASTM Type, Color, Category: III A 2
Melt Index, g/10 min.: 16.0
Density, g/cm 3: 0.950
Tensile Strength @ Break, psi: 3,580
Elongation @ Break, %: 610
1% Secant Modulus, psi: 102,000
Low Temperature Brittleness, F50 @ C: <-76
Vicat Softening Point, C: 125
FDA Status: 21CFR 177.1520
Key Properties: Excellent warp resistance and good flow
Applications: Thin-walled parts and toys
Formerly Known As: LS 511

LS 5140-00:
ASTM Type, Class, Category: III A 2
Melt Index, g/10 min.: 23.0
Density, g/cm 3: 0.950
Tensile Strength @ Break, psi: 3,760
Elongation @ Break, %: 250
1% Secant Modulus, psi: 122,000
Low Temperature Brittleness, F50 @ C: <-76
Vicat Softening Point, C: 122
FDA Status: 21CFR 177.1520
Key Properties: High warp resistance and impact resistance, good flow
Applications: Thin-walled containers and housewares
Formerly Known As: LS 514

QUANTUM: PETROTHENE High Density Polyethylene for Injection Molding (Continued):

LS 5230-00:
ASTM Type, Class, Category: III A 2
Melt Index, g/10 min.: 23.0
Density, g/cm 3: 0.956
Tensile Strength @ Break, psi: 4,300
Elongation @ Break, psi: 510
1% Secant Modulus, psi: 119,000
Low Temperature Brittleness, F50 @ C: <-76
Vicat Softening Point, C: 126
FDA Status: 21CFR 177.1520
Key Properties: Excellent balance of impact resistance, stiffness and toughness
Applications: Buckets, lids and housewares
Formerly Known As: LS 523

LS 5250-00:
ASTM Type, Class, Category: III A 1
Melt Index, g/10 min.: 33.0
Density, g/cm 3: 0.954
Tensile Strength @ Break, psi: 4,200
Elongation @ Break, %: 80
1% Secant Modulus, psi: 127,000
Low Temperature Brittleness, F50 @ C: -48
Vicat Softening Point, C: 123
FDA Status: 21CFR 177.1520
Key Properties: Excellent flow and good stiffness
Applications: Toys, thin-walled parts and base cups
Formerly Known As: LS 525

LS 5280-00:
ASTM Type, Class, Category: III A 1
Melt Index, g/10 min.: 31.0
Density, g/cm 3: 0.950
Tensile Strength @ Break, psi: 3,700
Elongation @ Break, %: 170
1% Secant Modulus, psi: 114,000
Low Temperature Brittleness, F50 @ C: <-76
Vicat Softening Point, C: 122
FDA Status: 21CFR 177.1520
Key Properties: Excellent flow and good stiffness
Applications: Thin-walled containers and overcaps
Formerly Known As: LS 528

QUANTUM: PETROTHENE High Density Polyethylene for Injection Molding (Continued):

LS 5300-00:
ASTM Type, Class, Category: III A 1
Melt Index, g/10 min.: 40
Density, g/cm 3: 0.950
Tensile Strength @ Break, psi: 3,600
Elongation @ Break, %: 80
1% Secant Modulus, psi: 105,000
Low Temperature Brittleness, F50 @ C: <-76
Vicat Softening Point, C: 122
FDA Status: 21CFR 177.1520
Key Properties: Excellent flow and warp resistance
Applications: Overcaps, thin-walled containers, toys and tubs
Formerly Known As: LS 530

LS 5450-00:
ASTM Type, Class, Category: III A 1
Melt Index, g/10 min.: 45
Density, g/cm 3: 0.958
Tensile Strength @ Break, psi; 4,500
Elongation @ Break, %: 50
1% Secant Modulus, psi: 131,000
Low Temperature Brittleness, F50 @ C: -10
Vicat Softening Point, C: 125
FDA Status: 21CFR 177.1520
Key Properties: High stiffness, impact and warp resistance
Applications: Thin-walled containers, toys and overcaps
Formerly Known As: LS 545

LS 5560-00:
ASTM Type, Class, Category: III A 3
Melt Index, g/10 min.: 7.0
Density, g/cm 3: 0.954
Tensile Strength @ Break, psi: 4,450
Elongation @ Break, %: 1,000
1% Secant Modulus, psi: 128,000
Low Temperature Brittleness, F50 @ C: <-76
Vicat Softening Point, C: 128
FDA Status: 21CFR 177.1520
Key Properties: High stiffness, impact and warp resistance
Applications: Pails and lids
Formerly Known As: LS 556

QUANTUM: PETROTHENE High Density Polyethylene for Injection Molding(Continued):

LY 6560-00:
ASTM Type, Class, Category: III A 3
Melt Index, g/10 min.: 6.2
Density, g/cm 3: 0.950
Tensile Strength @ Break, psi: 3,300
Elongation @ Break, %: 700
1% Secant Modulus, psi: 132,000
Low Temperature Brittleness, F50 @ C: <-76
Vicat Softening Point, C: 122
FDA Status: 21CFR 177.1520
Key Properties: Good processability, flow and strength
Applications: Closures, pails and caps
Formerly Known As: LY 656

LS 6402-00:
ASTM Type, Class, Category: III A 3
Melt Index, g/10 min.: 4.2
Density, g/cm 3: 0.952
Tensile Strength @ Break, psi: 3,800
Elongation @ Break, %: 1200
Tensile Impact, ft-lbs/in. 2: 34
Flexural Modulus, psi: 155,000
Vicat Softening Point, C: 126
Hardness, Shore D: 67
FDA Status: 21CFR 177.1520
Key Properties: Excellent impact resistance
Applications: Industrial parts, large containers and pails
Formerly Known As: LA 240B2

LS 6601-00:
ASTM Type, Class, Category: III A 3
Melt Index, g/10 min.: 6.5
Density, g/cm 3: 0.952
Tensile Strength @ Break, psi: 4,000
Elongation @ Break, %: 1,000
Tensile Impact, ft-lbs/in. 2: 34
Flexural Modulus, psi: 155,000
Vicat Softening Point, C: 126
Hardness, Shore D: 67
FDA Status: 21CFR 177.1520
Key Properties: High stiffness, and impact resistance
Applications: Closures, pails and caps
Formerly Known As: LA 260B1

QUANTUM: PETROTHENE High Density Polyethylene for Injection Molding (Continued):

LS 6901-00:
ASTM Type, Class, Category: III A 3
Melt Index, g/10 min.: 10.5
Density, g/cm 3: 0.952
Tensile Strength, @ Break, psi: 4,000
Elongation @ Break, %: 400
Tensile Impact, ft-lbs/in 2: 27
Flexural Modulus, psi: 160,000
Vicat Softening Point, C: 125
Hardness, Shore D: 66
FDA Status: 21CFR 177.1520
Key Properties: Excellent stiffness, impact and warp resistance
Applications: Child car seats, mower parts and pails
Formerly Known As: LA 290B1

LS 3601-00:
ASTM Type, Class, Category: III A 3
Melt Index, g/10 min: 5.0
Density, g/cm 3: 0.958
Tensile Strength @ Break, psi: 4,300
Elongation @ Break, %: 700
Tensile Impact, ft-lbs/in. 2: 30
Flexural Modulus, psi: 180,000
Vicat Softening Point, C: 127
Hardness, Shore D: 68
FDA Status: 21CFR 177.1520
Key Properties: Excellent impact resistance and stiffness, good warp resistance
Applications: Crates, toys and tote bins
Formerly: LA 360B1

LS 3801-00:
ASTM Type, Class, Category: III A 3
Melt Index, g/10 min.: 8.0
Density, g/cm 3: 0.958
Tensile Strength @ Break, psi: 4,500
Elongation @ Break, %: 500
Flexural Modulus, psi: 180,000
Tensile Impact, ft-lbs/in 2: 28
Vicat Softening Point, C: 126
Hardness, Shore D: 69
FDA Status: 21CFR 177.1520
Key Properties: High stiffness, impact and warp resistance
Applications: Crates and pails
Formerly Known As: LA 380B1

QUANTUM: PETROTHENE High Density Polyethylene for Injection Molding(Continued):

LS 3150-00:
ASTM Type, Class, Category: III A 2
Melt Index, g/10 min.: 17
Density, g/cm 3: 0.954
Tensile Strength, @ Break, psi: 4,100
Elongation @ Break, %: 150
Tensile Impact, ft-lbs./in. 2: 24
Flexural Modulus, psi: 170,000
Vicat Softening Point, C: 123
Hardness, Shore D: 68
FDA Status: 21CFR 177.1520
Key Properties: Excellent impact resistance and good flow
Applications: Containers, closures and housewares
Formerly Known As: LA 3150B

LS 3250-00:
ASTM Type, Class, Category: III A 1
Melt Index, g/10 min.: 31
Density, g/cm 3: 0.954
Tensile Strength @ Break, psi: 4,000
Elongation at Break, %: 7
Tensile Impact, ft-lbs./in. 2: 19
Flexural Modulus, psi: 170,000
Vicat Softening Point, C: 122
Hardness, Shore D: 68
FDA Status: 21CFR 177.1520
Key Properties: Excellent flow and impact resistance
Applications: Toys, auto accessories, closures, base cups, and containers
Formerly Known As: LA 3250B

LS 3420-00:
ASTM Type, Class, Category: III A 1
Melt Index, g/10 min.: 44
Density, g/cm 3: 0.954
Tensile Strength @ Break, psi: 4,000
Elongation @ Break, %: 5
Tensile Impact, ft-lbs./in. 2: 16
Flexural Modulus, psi: 155,000
Vicat Softening Point, C: 121
Hardness, Shore D: 68
FDA Status: 21CFR 177.1520
Key Properties: Excellent flow and impact resistance
Applications: Base cups, thin-walled containers and baskets
Formerly Known As: LA 3420B

QUANTUM: PETROTHENE High Density Polyethylene for Injection Molding (Continued):

LS 3550-00:
ASTM Type, Class, Category: III A 1
Melt Index, g/10 min.: 48
Density, g/cm 3: 0.952
Tensile Strength, @ Break, psi: 3,600
Elongation @ Break, %: 4
Tensile Impact, ft-lbs./in. 2: 15
Flexural Modulus, psi: 155,000
Vicat Softening Point, C: 119
Hardness, Shore D: 68
FDA Status: 21CFR 177.1520
Key Properties: High stiffness, impact and warp resistance
Applications: Thin-walled containers and housewares
Formerly Known As: LA 3550B

LF 6030-00:
ASTM Type, Class, Category: III A 3
Melt Index, g/10 min.: 3.0
Density, g/cm 3: 0.952
Tensile Strength @ Break, psi: 4,000
Elongation @ Break, %: 765
1% Secant Modulus, psi: 115,000
Low Temperature Brittleness, F50, C: <-76
Vicat Softening Point, C: 125
FDA Status: 21CFR 177.1520
Key Properties: Good toughness and warp resistance
Applications: Spray pump parts and overcaps
Formerly Known As: LB 603

LB 8510-00:
ASTM Type, Class, Category: IV A 3-4
Melt Index, g/10 min.: 1.3
Density, g/cm 3: 0.960
Tensile Strength, @ Break, psi: 4,510
Elongation @ Break, %: 900
1% Secant Modulus, psi: 139,000
Low Temperature Brittleness, F50, C: <-76
Vicat Softening Point, C: 132
FDA Status: 21CFR 177.1520
Key Properties: Excellent stiffness and impact resistance
Applications: Toys, foamed parts, buckets
Formerly Known As: LB 851

QUANTUM: PETROTHENE High Density Polyethylene for Injection Molding (Continued):

LF 8610-00:
ASTM Type, Class, Category: IV A 3
Melt Index, g/10 min.: 2.0
Density, g/cm 3: 0.960
Tensile Strength, @ Break, psi: 4,580
Elongation @ Break, %: 740
1% Secant Modulus, psi: 140,000
Low Temperature Brittleness, F50, C: <-76
Vicat Softening Point, C: 131
FDA Status: 21CFR 177.1520
Key Properties: Maximum stiffness and good toughness
Applications: Lawn furniture components
Formerly Known As: LB 861

LS 6040-00:
ASTM Type, Class, Category: IV A 3
Melt Index, g/10 min.: 5.5
Density, g/cm 3: 0.962
Tensile Strength, @ Break, psi: 4,200
Elongation @ Break, %: 1,200
1% Secant Modulus, psi: 145,000
Low Temperature Brittleness, F50, C: <-76
Vicat Softening Point, C: 129
FDA Status: 21CFR 177.1520
Key Properties: Excellent impact resistance and stiffness
Applications: Toys, crates, housewares and overcaps
Formerly Known As: LS 604

LS 6060-00:
ASTM Type, Class, Category: IV A 2-3
Melt Index, g/10 min.: 10.0
Density, g/cm 3: 0.962
Tensile Strength, @ Break, psi: 4,900
Elongation @ Break, %: 830
1% Secant Modulus, psi: 152,000
Low Temperature Brittleness, F50, C: <-76
Vicat Softening Point, C: 129
FDA Status: 21CFR 177.1520
Key Properties: Excellent stiffness and warp resistance
Applications: Crates, toys and overcaps
Formerly Known As: LS 606

QUANTUM: PETROTHENE High Density Polyethylene for Injection Molding (Continued):

LS 6080-00:
ASTM Type, Class, Category: IV A 2-3
Melt Index, g/10 min.: 8.5
Density, g/cm 3: 0.963
Tensile Strength @ Break, psi: 4,340
Elongation at Break, %: 1,200
Tensile Impact, ft-lbs/in. 2: 48
Flexural Modulus, psi: 246,000
Low Temperature Brittleness, F50, C: <-76
Vicat Softening Point, C: 194
Hardness, Shore D: 68
FDA Status: 21CFR 177.1520
Key Properties: Very high stiffness, good melt flow
Applications: Materials handling containers, pallets, structural foam
Formerly Known As: LS 608

LS 6090-00:
ASTM Type, Class, Category: IV A 2
Melt Index, g/10 min.: 12.5
Density, g/cm 3: 0.962
Tensile Strength, @ Break, psi: 4,630
Elongation @ Break, %: 1000
1% Secant Modulus, psi: 164,000
Low Temperature Brittleness, F50, C: <-76
Vicat Softening Point, C: 128
FDA Status: 21CFR 177.1520
Key Properties: Excellent stiffness and good warp resistance
Applications: Overcaps, toys, lids
Formerly Known As: LS 609

LS 6180-00:
ASTM Type, Class, Category: IV A 2
Melt Index, g/10 min.: 22.0
Density, g/cm 3: 0.962
Tensile Strength @ Break, psi: 4,840
Elongation @ Break, psi: 240
1% Secant Modulus, psi: 154,000
Low Temperature Brittleness, F50, C: <-76
Vicat Softening Point, C: 128
FDA Status: 21CFR 177.1520
Key Properties: High stiffness and warp resistance
Applications: Thin-walled containers, overcaps and housewares
Formerly Known As: LS 618

QUANTUM: PETROTHENE High Density Polyethylene for Injection Molding (Continued):

LS 6300-00:
ASTM Type, Class, Category: IV A 1
Melt Index, g/10 min.: 36.0
Density, g/cm 3: 0.962
Tensile Strength @ Break, psi: 4,940
Elongation @ Break, %: 50
1% Secant Modulus, psi: 153,000
Low Temperature Brittleness, F50, C: <-76
Vicat Softening Point, C: 125
FDA Status: 21CFR 177.1520
Key Properties: High stiffness and warp resistance
Applications: Thin-walled containers and housewares
Formerly Known As: LS 630

QUANTUM: PETROTHENE High Density Polyethylene for Sheet and Profile Extrusion:

LR 9200-00:
ASTM Type, Class, Category: III A 4-5
Density, g/cm 3: 0.946
Melt Index, g/10 min.: 0.45
Tensile Strength, @ Break, psi: 3,450
Elongation @ Break, %: >600
1% Secant Modulus, psi: 104,000
Low Temperature Brittleness, F50 @ C: <-76
Vicat Softening Point, C: 122
FDA Status: 21CFR 177.1520
Key Properties: Good toughness, excellent processability
Applications: Pipe, pipe coating, profiles
Formerly Known As: LR 920

LB 6001-00:
ASTM Type, Class, Category: III-IV A 5
Density, g/cm 3: 0.959 min.
Melt Index, g/10 min.: 0.25
Tensile Strength @ Break, psi: 4,400
Elongation @ Break, %: >600
Tensile Impact, ft-lb/in. 2: 120
Flexural Modulus, psi: 220,000
Low Temperature Brittleness, F50 @ C: <-76
Heat Deflection Temperature @ 66 psi, C: 78
Vicat Softening Point, C: 127
Hardness, Shore D: 68
FDA Status: 21CFR 177.1520
Key Properties: Low sag, high melt strength
Applications: Sheet extrusion, multicavity thermoforming
Formerly Known As: HD 6001

LB 6002-00:
ASTM Type, Class, Category: III-IV A 5
Density, g/cm 3: 0.959 min.
Melt Index, g/10 min.: 0.14
Tensile Strength @ Break, psi: 4,400
Elongation @ Break, %: >600
Tensile Impact, ft-lb/in. 2: 120
Flexural Modulus, psi: 220,000
Low Temperature Brittleness, F50 @ C: <-76
Heat Deflection Temperature @ 66 psi, C: 78
Vicat Softening Point, C: 127
Hardness, Shore D: 68
FDA Status: 21CFR 177.1520
Key Properties: Low sag, high melt strength
Applications: Sheet extrusion, multicavity thermoforming
Formerly Known As: HD 6001C

QUANTUM: PETROTHENE High Density Polyethylene for Sheet and Profile Extrusion (Continued):

LB 6003-00:
ASTM Type, Class, Category: III-IV A 5
Density, g/cm 3: 0.959 min.
Melt Index, g/10 min.: 0.28
Tensile Strength, @ Break, psi: 4,400
Elongation @ Break, psi: >600
Tensile Impact, ft-lbs/in. 2: 100
Flexural Modulus, psi: 220,000
Low Temperature Brittleness, F50 @ C: <-76
Heat Deflection Temperature @ 66 psi, C: 78
Vicat Softening Point, C: 125
Hardness, Shore D: 68
FDA Status: 21CFR 177.1520
Key Propeties: Excellent toughness, stiffness and processability
Applications: Sheet extrusion, thermoforming
Formerly Known As: HD 6003

LB 6004-00:
ASTM Type, Class, Category: III-IV A 5
Density, g/cm 3: 0.959 min.
Melt Index, g/10 min: 0.32
Tensile Strength, @ Break, psi: 4,400
Elongation @ Break, %: >600
Tensile Impact, ft-lbs/in 2: 100
Flexural Modulus, psi: 220,000
Low Temperature Brittleness, F50 @ C: <-76
Heat Deflection Temperature @ 66 psi, C: 78
Vicat Softening Point, C: 125
Hardness, Shore D: 68
FDA Status: 21CFR 177.1520
Key Properties: Excellent toughness, stiffness and processability
Applications: Sheet extrusion
Formerly Known As: HD 6004

LB 7420-00:
ASTM Type, Class, Category: III-IV A 4
Density, g/cm 3: 0.959 min.
Melt Index g/10 min.: 0.68
Tensile Strength @ Break, psi: 4,500
Elongation @ Break, %: 910
1% Secant Modulus, psi: 141,500
Low Temperature Brittleness, F50 @ C: <-76
Vicat Softening Point, C: 130
FDA Status: 21CFR 177.1520
Key Properties: High stiffness
Applications: Sheet extrusion, deep draw vacuum forming
Formerly Known As: LB 742

QUANTUM: PETROTHENE High Density Polyethylene for Sheet and Profile Extrusion (Continued):

LB 8300-00:
ASTM Type, Class, Category: III-IV A 5
Density, g/cm 3: 0.957 min.
Melt Index, g/10 min.: 0.14
Tensile Strength @ Break, psi: 4,390
Elongation @ Break, %: 880
1% Secant Modulus, psi: 135,400
Low Temperature Brittleness, F50 @ C: <-76
Vicat Softening Point, C: 133
FDA Status: 21CFR 177.1520
Key Properties: Very low sag, high stiffness and good chemical resistance
Applications: Sheet extrusion, vacuum and thermoforming
Formerly Known As: LB 830

LB 8320-00:
ASTM Type, Class, Category: III-IV A 5
Density, g/cm 3: 0.957 min.
Melt Index, g/10 min.: 0.26
Tensile Strength @ Break, psi: 4,450
Elongation @ Break, %: 960
1% Secant Modulus, psi: 136,700
Low Temperature Brittleness, F50 @ C: <-76
Vicat Softening Point, C: 131
FDA Status: 21CFR 177.1520
Key Properties: Low sag, high stiffness
Applications: Sheet extrusion and thermoforming
Formerly Known As: LB 832